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NUMERICAL NOTATION ON GREEK VASES

(PLATES 1-6)

MANY of the vases of Greek times found in the Athenian Agora¹ carry numerical notations, ordinarily incised, which seem to indicate capacity, price or weight. The methods of counting, calculating and measuring exemplified in these notations are various and may often reflect not only individual differences among the Athenians themselves but sometimes non-Attic usages, where a slave or resident-alien made the notation, or where an imported pot was marked before its arrival in Athens.² In spite of its informal nature, and partly because of it, this material makes a valuable supplement to the mass of evidence on numerical notation presented in the admirable articles of M. N. Tod.³

The Agora material is here divided into three main categories: A. indications of capacity (1-61); B. price marks (62-70); C. indications of tare and net weight (71-78). Such a division will, it is hoped, make for some clarity amid the variety of notational methods, despite the attendant disadvantages: in some cases where a pot has two different types of inscription it must occur in two of the categories; in other cases the inscription may be too fragmentary or indefinite to allow of certain assignment to a particular category. Such examples are placed together with the certain ones which they most resemble. Still another type of material, numerical notations made not on complete pots but on sherds (79-95), is treated in a separate section, which is followed by several examples not immediately susceptible of elucidation (96-103).

Because the interpretation will often seem arbitrary in a specific case, it is perhaps desirable to outline the process of thought followed with various types of inscriptions. That any of the inscriptions which have repeated symbols is a number is immediately obvious. When that number is carefully recorded on the neck or shoulder of a jar in a place where it is immediately visible, there is a strong presumption that the number

¹ This study was undertaken during the tenure of a fellowship under the John Simon Guggenheim Memorial Foundation, which made work in Athens possible. Thanks are due also to the American School of Classical Studies, and in particular to the field director and staff of the excavations of the Athenian Agora, both for publication permission and for assistance and facilities of all sorts.

² Marks made by scratching, however, because of their informal nature, may most often be attributed to the owner, and perhaps sometimes to a middleman like the retail seller. The manufacturer of the jar is more likely to guarantee his goods with marks that are less casual and admit of less tampering, i. e. marks made before firing, by stamps, incision, or by painting.

³ Cf. *B.S.A.*, XLV, 1950, pp. 126 ff., where references to earlier articles will be found.

is related in some way to the jar or its contents. If the jar is complete and it can be shown that the number actually does express the capacity, for instance, in terms of an ancient unit known to have been used for that type of vessel, there is a strong probability that other similar numbers, similarly located, even on small fragments of similar vessels, have a similar significance. This probability is strengthened when the number uses as its unit the initial of a unit of capacity. That is, Π may be five of anything, but just as ΠH is seven drachmae and $\Pi\Sigma\Sigma$ is seven staters, so (at least when they appear on a jar) it is highly likely that $\Pi\text{X}\text{X}$ is seven choes and $\Pi\text{K}\text{K}$ is seven kotylai. There is naturally an element of uncertainty in the interpretation of all inscriptions where the complete pot is not preserved to bear it out, but it has seemed best to make the interpretations on the basis of similarities, wherever possible, and leave for the last category of inexplicables only those pieces which do not tie in with the regular practice.

Most of the material included here belongs to the 5th and 4th centuries B.C. and may be so dated by shape and fabric even when found in an irrelevant context. One piece (1) is of the 7th century B.C. and one (96) is of the early Roman period; ten (24, 25, 31, 35, 38, 39, 40, 53, 75, 83) are certainly of the Hellenistic period; four (20, 28, 73, 81) may be Hellenistic or earlier. All acrophonic numerals recognizable as such are included, except (1) single letters which most often can not be identified with certainty as numerals, and (2) a small group of 'shopping lists' with numbers of items. These latter add nothing to our knowledge of numerals and belong to a separate undertaking. Not all of the inscriptions are illustrated; it may be assumed, however, that where the illustration is not included the inscription presents no difficulties of reading. That is, the illustrated inscriptions are those which present some problems in reading or those which seem to be representative or illustrative of a type.

A. INDICATIONS OF CAPACITY.

The majority of the following examples are plain unglazed storage amphorae or fragments of such jars. Wherever possible the capacity of the jar itself or, in the case of fragments that preserve sufficient indication of shape, of a closely similar jar has been measured as a rough check on the interpretation of the notations. Since, for the most part, the possible variations in the size of the standard units will not affect this rough check, the generally accepted metrical equivalents of Hultsch⁴ are used:

oxybaphon	=	.0684 liters
kotyle (4 oxybapha)	=	.2736 "

⁴ *Griechische und römische Metrologie*, 1882, p. 703. These measures are liquid measures except for the kotyle, which is the unit of both wet and dry, and the choinix, which may also have been used for liquids under another name. See below, under 60. In the Roman period the large liquid measure was the amphora, which held eight choes and was equal to a Roman cubic foot.

choinix (4 kotylai)	=	1.094	"
chous (12 kotylai)	=	3.283	"
metretes (12 choes)	=	39.390	"

Complete justification is not always given for interpreting notations as indications of capacity. The decision was sometimes based on general likelihood, sometimes on the greater frequency of capacity notations and on the use of less ambiguous symbols for price and weight. What may seem in some cases to be an arbitrary interpretation of meaningless scratches is based on the close comparison of the doubtful case with meaningful examples, with regard to the type of jar, location of the graffito on the jar and details of context. The various methods of notation are presented in order of increasing complication. This is, of course, not the same as chronological order, as will be seen by comparing the brief note of context date accompanying all examples where the circumstances of finding are relevant for the dating of the piece.

In the simplest of these methods only strokes are used, without further indication of the unit employed than is implicit in the size of the jar. Presumably, each time the unit-measure was emptied into the jar a stroke was made, so that the total number of strokes represents the total number of unit-measures which the jar would hold.

1. Neck of a large decorated amphora. Pl. 1.

P 17356. 7th century B.C.

Incised:] III

Without either the complete jar or the complete inscription there can be no consideration of units, but this is indubitably a number of the tallying sort and so probably an indication of capacity.

2. Neck of Chian amphora.

P 11068. Early 5th century B.C.

Incised on handle: ≡

Similar complete Chian amphorae of a somewhat later time hold seven Athenian choes.⁵ Despite the evidence which makes the twelve-chous metretes the large liquid unit, the ordinary amphora of Greek as well as Roman times is more likely to hold eight choes.⁶ This fact combines with the 7:8 ratio of Chian and Athenian coins to persuade us that the Chian standard chous also stood in a 7:8 ratio with the Athenian chous. These jars would then hold eight Chian, or seven Athenian, choes. On this pot the informal indication of capacity would then be the work of the Athenian purchaser, probably for a re-use of the jar.

3. Semi-glazed krater.

P 21930. Mid 5th century B.C.; *Hesperia*, XXII, 1953, p. 88, no. 86, pl. 32.

Incised under the base: IIIIIII

The capacity is eight choinikes. This vessel may have been used as a mixing bowl for some combination of dry foods that were measured by the choinix. It was marked, perhaps, by the cook

⁵ V. Grace, *Hesperia*, III, 1934, p. 296; *Hesperia*, Suppl. VIII, p. 182.

⁶ This generalization is based on as yet unpublished measurements of jars in the Agora.

so that as it sat upside down on the shelf he could tell by a quick glance if it was big enough for a particular recipe.

4. Pithos shoulder and rim fragment.

P 13869. Early 5th century B.C.

Incised on neck: IIIII

Although no comparable pithoi are preserved complete, so that their capacity may be measured, we must assume as unit either the large liquid measure (eight or twelve choes) or the large dry measure (48 choinikes).

Two other fragments on which the inscriptions are incomplete may use this same method:

5. Amphora neck fragment.

P 9242. 5th century B.C., last quarter.

Incised:] IIII i. e. four or more choes.

6. Amphora neck fragment.

P 9245. 5th century B.C., last quarter.

Incised:] IIIII i. e. five or more choes.

A slight variation of the simple stroke method is required by the introduction of fractions:

7. Small fragmentary amphora. Pl. 1.

P 4873. 5th century B.C., second half.

Incised on neck:] IIIIC

This is not, however, a certain example of the simple stroke method, since it is a small jar and probably held only one or two choes with four or more and one-half kotylai, so that it may have read, for example, X IIIIC. For this type of notation, see below. But the presence of two units, one large and one small, was sometimes indicated by another slight variation on the simple stroke method; see No. 8.

8. Chian amphora, restored complete. Pl. 1.

SS 1840. 5th century B.C., third quarter.

Incised on neck: ≡IIIIII

The capacity is such that this must be read as seven choes, three kotyles, and two of some smaller unit, either kyathoi or, more probably, oxybapha. The fact that a Chian jar was supposed to hold exactly seven choes (eight Chian choes) need not invalidate either this inscription or this interpretation. As one might expect, there is considerable variation of capacity among amphorae with the same stamped guarantee. And if, as seems to me likely, the jars were manufactured in accordance with minimum specifications of dimensions,⁷ they must often have held more than the minimum, so that when actually measured, as this was, the total capacity would be something over seven choes.

⁷ Cf. my article in *B.C.H.*, LXXVI, 1952, pp. 18 ff. I hope shortly to publish such minimum specifications in connection with jars from the Athenian Agora.

9. Amphora neck fragment. Pl. 1.

P 9247. 5th century B.C., last quarter.

Incised: $\text{J} \equiv \text{IIIIII}$

If we may judge from the capacities of similar amphorae, we must read this as six choes and six kotylai.

The simple stroke method may also apparently be used with an accompanying summation:

10. Chian amphora, restored complete.

P 2371. 5th century B.C., third quarter; *Hesperia*, IV, 1935, p. 516, fig. 28, b.Incised: $\text{F} \text{IIIIIIII}^{\text{H}}$

The capacity of the amphora is seven Athenian choes. As noted above, however, the 7:8 ratio of Chian-Athenian coinage suggests a similar ratio in capacities. Whatever the first marks may mean, it is fairly certain that the eight strokes followed by "8" refer to the Chian chous capacity.

A refinement on the simple stroke method with summation may be seen in three fragments from one well group and one other fragment from a slightly later and different context. Although there is no way of knowing the capacities of the pots to which these various fragments belonged, the notations speak so clearly that we can be sure that they were made as the pots were measured.

11. Fragment of unglazed pot.

P 2364. 5th century B.C., third quarter; *Hesperia*, IV, 1935, p. 516, fig. 28, d.Incised: CIIIIII

12. Amphora handle fragment.

P 11386. 5th century B.C., third quarter.

Incised: $\text{IIIIIIII}^{\text{H}}$

13. Cooking pot fragment.

P 11387. 5th century B.C., third quarter.

Incised: EIIII

14. Amphora handle.

P 9340. Late 5th-4th centuries B.C.

Incised: HIIIIII

In the measuring process, after each unit-measure was emptied into the pot, a stroke was scratched on the jar. When the last unit filled the pot, the measurer substituted for the final stroke the total number, so that the jar which held six units shows five strokes and a "6," that which held eight units shows seven strokes and an "8," and so on. The fourth fragment may have some completely different signification, or it may illustrate this same type of counting in a rather different way, in that the last unit was recorded by a simple cross stroke which joined the last two strokes and thus makes an "8" out of strokes "6" and "7." The use of alphabetic numerals in the third quarter of the 5th century is not unprecedented in Athens.⁸ These examples of a private and informal use

⁸ I. G., I², 760; Tod, *op. cit.*, p. 137; Häckl, *Merkantil Inschriften*, Nördlingen, 1906, *passim*.

of alphabetic numerals centuries before they appear regularly in official documents recall the private and informal use of the Ionic letters long before the law of 403 B.C.

The usual numbers in the 5th century are the so-called acrophonic numerals, which use the initial of the number. Except in money matters the simple stroke may serve as the unit in this system, so that there are some capacity graffiti in which the simple stroke method combines with an acrophonic numeral.

15. Chian amphora. Pl. 6.

SS 1839. 5th century B.C., third quarter; *Hesperia*, III, 1934, pp. 296, 306.

Incised on neck: $\Gamma \Pi \equiv$

Compare No. 8 above. The capacity of this amphora gives us the interpretation seven choes, three kotylai.

16. Amphora fragment.

P 21965. Mid 5th century B.C.; *Hesperia*, XXII, 1953, p. 100, no. 140, fig. 4.

Incised: $\Delta \begin{smallmatrix} \text{||||} \\ \text{||||} \end{smallmatrix} [$

This may be 18, but since amphorae do not ordinarily hold more than 12 choes (one metretes) that would not be a likely capacity. It would be an unusual price inscription with either unresolved obols or drachmae expressed by the usual obol sign. It may then perhaps best be interpreted as ten choes and eight kotylai.

17. Upper half of Chian amphora. Pl. 1.

P 18989. 5th century B.C., second half.

Incised on lower neck: $\Gamma \Pi$

||||

Neither No. 16 nor No. 17 shows the pure acrophonic system in which not more than four simple strokes occur, the "5" being expressed by Γ . But the pure acrophonic system was not always completely adaptable to the recording of capacity, since the measurer could not be sure beforehand how many units it would take to fill the vessel. In the case of No. 17 a break between the Γ and the single strokes makes the reading uncertain; it may be either $\begin{smallmatrix} \Gamma \text{|||} \\ \text{||||} \end{smallmatrix}$ or $\begin{smallmatrix} \Gamma \text{||} \\ \text{||||} \end{smallmatrix}$. In the former case we shall see the lower line of strokes as the tally on which the five choes of the Γ were counted up as they were poured in. The total contents would then be eight choes. In the latter case the contents of a five-choos measure were first poured in, then two choes, one after the other; there was still a small amount of space left. The measurer could not know that it would hold five kotylai, so he poured in one kotyle after another, marking each with a single stroke. The total contents then appears as seven choes and five kotylai. Complete Chian jars, as was seen above, hold somewhat more than seven Athenian choes.

18. Amphora fragment.

P 9243. 5th century B.C., last quarter.

Inscribed: $\begin{smallmatrix} \text{|||} \\ \Gamma \end{smallmatrix} [$

This appears to be eight choes, but it is not complete.

19. Knidian amphora. Pls. 1 and 6.SS 6602. Late 2nd-early 1st centuries B.C.⁹

Incised on neck: ΠΙΙΙ

The capacity of this jar is 33.625 liters. If this is a capacity notation, as seems likely, there are two possible interpretations. We may assume that the unit is $\frac{1}{8}$ of the total capacity, i. e. 4.203, and ask if there is evidence for such a Knidian chous. There is none. Knidian jars of this general period vary in capacity from 27 to 34 liters, and yet the stamps on their handles seem to guarantee that they are standard in size and hold an equal amount. The only amount they can all hold is something less than the capacity of the least capacious. That this happens to be eight choes (26.208 liters) makes it likely that the graffito on this jar records not what it can hold but what it did hold when filled, sold or delivered. The fact that it is an even number of choes suggests that it is not the actual measured capacity but a note made by the filler (saying how much he had put in), by the seller (saying how much he was selling) or by the user.

20. Pithos rim fragment.

P 11543.

Incised: ΔΔΠ[

Using Heron's¹⁰ formula for the capacity of pithoi we might assume that with an average diameter of three feet and a height of four feet this pithos would hold 28 cubic feet or amphorae (the Roman amphora is equal to one cubic foot). An average diameter of three feet would mean a mouth diameter of less than that. The estimated diameter of this mouth is something over two feet.

In the pure acrophonic system, the unit may be represented by the initial letter of the unit,¹¹ i. e. Χ for χούς or Κ for κοτύλη. Where two units were used, it was apparently possible to use the single stroke for one and the initial for the other, as in the following examples:

21. Amphora handle fragment. Pl. 1.

P 9239. 5th century B.C., last quarter.

Incised:] ΙΙΙ Κ [

See photograph on Plate 1 for details of the symbols.

22. Amphora neck and shoulder fragment.

P 9240. 5th century B.C., last quarter.

Incised:] ΙΙΙ Κ

The jars of Nos. **21** and **22** held some number of choes greater than three and beyond that, kotylai to the number of four and three.

For completeness' sake, we may add:

⁹ Since this, like the other dates given in this catalogue, is a context date, it provides only a general terminus ante quem for the jar. The exact date of the jar itself, based on evidence from the stamps, is not material to the present argument and will more properly appear in Miss Virginia Grace's publication of the Knidian jars of the Athenian Agora.

¹⁰ *Metrologicorum Scriptorum Reliquiae* (ed. F. Hulstsch), Leipzig, 1864, I, pp. 202 ff.

¹¹ Tod, *B.S.A.*, XVIII, 1911-12, p. 132.

23. Small amphora fragment.
P 9246. 5th century B.C., last quarter.
Incised:] K[

That there was no consistent practice in the use of simple strokes and acrophonic signs for large and small units is shown by the following:

24. Shoulder piece of small jar.
P 879.
Incised: XIII [

The size of the fragment suggests a pot which must have been not much larger than a chous; X may be interpreted as one chous; the three (or more) kotylai are represented by simple strokes.

There are two other less certain examples of this:

25. Amphora fragment.
P 3863.
Incised:] IIHH [

As we shall see below, H ordinarily appears in those capacity numbers which are sandwiched in between the large and small units, and so must ordinarily be interpreted as 'hemi.' It is possible to read this as two or more choes and two half-choes. That is, when it was measured, first the choes were poured in; space seemed to be left for a half-chous, which was poured in and marked; but there seemed still enough space for another half-chous, so that this also was poured in and marked. Whether there were any kotylai after these half-choes we do not know. This seems to me the most probable interpretation, but the incompleteness of both fragment and inscription make it uncertain. It might, perhaps, be interpreted as a large sum of money like II]IIHH[X, but the large gap between hundreds of drachmae and obols seems odd, and the comparative infrequency of large sums of money on pots militates against this interpretation.

26. Amphora neck. Pl. 1.
P 11383. 5th century B.C., third quarter.
Incised: H IIII
Δ

This I would read as ten and a half choes and four kotylai, but aside from the general shape of the amphora neck and the comparison with other definite examples there is no proof.

27. Amphora neck. Pl. 2.
P 16444. 5th century B.C., second half.
Incised: Δ ± II

The amphora seems to have been large enough for a capacity of ten choes and one-half and two kotylai.

More convincing again is the following use of acrophonic signs for large units and simple strokes for small:

28. Small amphora neck.
P 20367. Hellenistic (3rd-2nd centuries B.C.)
Incised: XXXΓIIII

The size of the jar is suitable for three choes and eight kotylai.

29. Amphora neck. Pl. 2.
P 12657. Late 5th century B.C.
Incised:]XEIII[i. e. at least one chous, one-half chous and three kotylai.
The writer, being psilotic or an "h"-dropper, was probably not Athenian.
30. Chian amphora.
P 2368. 5th century B.C., third quarter; *Hesperia*, IV, 1935, p. 516, fig. 28, f.
Incised: EII
The jar holds eight Chian choes, so this must be read as one-half metretes, two choes. The writer here is using both Chian standard and Chian psilosis.
- In the acrophonic system most often the initial of both large and small units is used, and perhaps also the initial for "half" as an intermediate stage between the two units.
31. Amphora neck fragment.
P 22869. 2nd century B.C.
Incised:]XΠΚ[i. e. at least one chous and six or more kotylai.
32. Amphora fragment. Pl. 2.
P 8432. Late 5th century B.C.
Incised: $\begin{smallmatrix} XX \\ H \\ K \end{smallmatrix} [$ i. e. at least two choes and one-half and at least one kotyle.
33. Amphora neck fragment.
P 9250. 5th century B.C., last quarter.
Incised:]XXHK[i. e. at least two choes and one-half and at least one kotyle.
34. Upper part of amphora.
P 10690. 4th century B.C., second half.
Incised:]XXHKKKK i. e. at least two choes and one-half and four kotylai.
35. Small amphora neck fragment.
P 5841. Hellenistic (3rd-2nd centuries B.C.)
Incised:]XK i. e. at least one chous and one kotyle.
36. Amphora fragment.
P 12635. Late 5th century B.C.
Incised:]XXXX[i. e. at least four choes.

In one variation of the acrophonic system the abbreviation or initial of the unit precedes the number.

37. Neck of globular black-glazed lekythos. Pl. 2.
P 12702. Mid 4th century B.C.; *Hesperia*, VIII, 1939, p. 280, note 38.
Incised: KOTY : ΠΙΤ i. e. kotylai: seven and one quarter.
A similar complete example (P 3992) holds almost eight kotylai.

38. Amphora neck fragment.

P 6733. Hellenistic (3rd-2nd centuries B.C.)

Incised: XO $\overline{\text{P}}$ X[i. e. six or more choes.

39. Amphora fragment.

P 7042.

Incised:]XΔIK [i. e. 11 choes and one or more kotylai.

This is not at all certain, and might also be restored: *e. g.* ΓXX]X δικ[αίως.

40. Amphora fragment. Pl. 2.

P 19674.

Incised: X ΓΗΙ—

This is probably to be interpreted as choes: five and one-half; small unit (kotyle): one; smaller unit (kyathos): one. Measuring down to such detail seems rather fine-drawn and perhaps it is better to regard the horizontal line as merely a concluding dash (cf. 45).

Another variation allows the unit initial to combine with the acrophonic numeral.

41. Upper part of amphora.

P 4407. 4th century B.C., last quarter.

Incised: $\overline{\text{P}}$ $\overline{\text{P}}$ HKKC i. e. ten and one-half choes; two and one-half kotylai.

We must conclude that the measurer at first used a five-chous measure but did not trust his memory enough to wait till the amount reached ten choes. The use of two signs for one-half may be thought strange, but there can be no doubt that this is the case. It is worth noting that H is most often used for the half-chous and should probably be thought of as the initial of *ἡμίχουν*, while C is taken over for half of the small unit from its customary use as one-half obol.

42. Amphora neck fragment.

P 9251. 5th century B.C., last quarter.

Incised: $\overline{\text{P}}$ $\overline{\text{P}}$ [i. e. ten choes or more.

43. Amphora neck fragment. Pl. 2.

P 9252. 5th century B.C., last quarter.

Incised:] $\overline{\text{P}}$ ΗΙ[i. e. ten or five choes, one-half, and one or more kotylai.

44. Mendeian (?) amphora neck.

P 11382. 5th century B.C., third quarter.

Incised: on one side: ΔKK i. e. ten choes, two kotylai.

on the other: Δ< i. e. ten staters.

The fact that the capacity is recorded in its final form, without showing intermediate stages of the measuring process, suggests that this might represent a more formal record than the usual owner's graffito. Such a conjecture would be supported by what must be a price inscription on the other side. See below, Section B.

45. Amphora.

P 11389. 5th century B.C., third quarter.

Incised: $\overline{\text{P}}$ +

+ i. e. seven choes.

—
The capacity is seven choes.

46. Amphora fragment. Pl. 2.
P 12962. Late 5th century B.C.
Incised: ΠΗΚΚ [

The interpretation of this piece is difficult, for although the presence of the *kappas* certifies it as a capacity inscription, the *etas* are used in an unprecedented fashion. As far as it is possible to tell from this small fragment the amphora was of ordinary amphora size (anywhere from six to twelve choes). So the H cannot stand for 100 and the whole be 602 kotylai. On the other hand, it seems unlikely that the hemichous would be used as a measure where the whole was considerably greater than a chous, or that five hemichoes would be used as a unit at all. On the basis of numerous parallels in which X appears in the same position as the H here it seems easier to believe that H is here used for X, perhaps by a slave from foreign parts who found little difference between the aspirate and the aspirated K. The alternative is to think that H stands for hydria, which was at least in some areas (Pontos) thought of as a measure.¹²

47. Small amphora, restored complete. Pls. 2 and 6.
P 18609. Late 5th-mid 4th centuries B.C.
Incised: ΠΚΚΗ

The capacity, measured with lentils, varies between 2.000 and 2.150 liters; seven and one-half kotylai of .273 give 2.0475 liters. Perhaps the H here is the initial of *ἡμικοτύλιον*.

48. Amphora fragment.
P 23414. 4th century B.C., second half.
Incised: Π[i. e. five choes or more.

49. Amphora fragment.
P 9244. Late 5th century B.C.
Incised: Π[i. e. five choes or more.

Another variation in the acrophonic system does not combine the unit-initial with the number.

50. Amphora neck fragment. Pl. 3.
P 2067. Late 5th-early 4th centuries B.C.
Incised: ΠΧΗΚ i. e. six and one-half choes, two kotylai.

51. Black-glazed oinochoe neck fragment.
P 2809. End of 5th century B.C.
Incised:]ΠΚ

The fragment is too small to indicate the exact size of the amphora, but it is most likely to have held less than two choes and more than six kotylai. We may most probably restore ΧΠΚ for one chous, six kotylai.

52. Amphora fragment. Pl. 3.
P 7922. 5th century B.C., last quarter.
Dipinto (red):]ΠΧΧΧ[

It is to be noted that this inscription was painted. It seems impossible to tell whether it was painted before or after firing. If it was before, it suggests that the capacity of the jar, eight or more

¹² *Metrol. Script. Rel.*, I, p. 264.

choes, was known before the jar was durable enough to be measured by filling with some substance. We might expect, therefore, that the capacity was known from the dimensions of the jar.¹³

53. Amphora fragment.

P 9050. Hellenistic (mixed 3rd and 2nd centuries B.C.)

Incised:]HKK[

The fragment is from a large storage amphora which must have held some number of choes in addition to this half-chous and two or more kotylai.

54. Amphora fragment. Pl. 3.

P 9249. 5th century B.C., last quarter.

Incised: Π + Η. [i. e. six and one-half choes and ?

55. Amphora neck fragment.

P 11375. Late 5th-early 4th century B.C.

Incised (before firing): ΔΧ[

At least 11 and perhaps 12 choes, recorded before firing and so presumably in accordance with specified dimensions for one metretres.

56. Amphora handle fragment.

P 20333. 4th century B.C., first half.

Incised: ΠΧΧΧ[i. e. eight or more choes.

57. Mendeian amphora neck.

P 17010. Late 5th century B.C.

Incised: ΠΧΧΧΤ
TE

In addition to the eight choes there was presumably a fraction. The Τ in the first line may stand for τρίτον, in which case a third of a chous was perhaps not sufficient to fill the jar so that one-fourth chous (ΤΕ) was added. But the Τ may have been meant as one-fourth, and was so explained in the second line.

A few other inscriptions indicate capacity but present anomalies of one sort or another.

58. Chian amphora, complete.

P 2366. 5th century B.C., third quarter; *Hesperia*, IV, 1935, p. 496, fig. 17, no. 86.

Incised: ΠΕΕΧΔΕΚΑΤΕΞΑΡΕΞ¹⁴

The measured capacity is seven Attic choes, so that it is not merely tempting but almost necessary to take ΠΕΕΧ as π(έντε), ε(ἑς) ε(ἑς) χ(όες) i. e. seven choes. This would mean that the unit must also have had, at least in the minds of some individuals, an acrophonic sign. That this particular individual was psilotic and so non-Athenian need not make any difference since the presence of price (δεκατέσσαρες) as well as capacity suggests that the inscriber was seller or merchant rather than owner.

¹³ Cf. note 7.

¹⁴ Reading published by L. Talcott in *Hesperia*, IV, 1935, pp. 515-516, fig. 28, a.

59. Amphora neck fragment. Pl. 3.

P 9241. 5th century B.C., last quarter.

Incised: J|||H OOO

Traces to the left of the two simple strokes may be two more simple strokes, a N, or a retrograde K and another stroke. The greatest likelihood is for the simple strokes, since the H standing between simple strokes and what I think must be taken as a smaller unit initial must stand for "hemi." If this inscription had read |||HKKK, it would be comparable to Nos. 20 following above and there would be no question about its interpretation: four and one-half choes, three kotylai. Here only the smaller unit is different, and since there is a small capacity unit whose initial symbol must be O (oxybaphon), it seems best to read: more than four choes, one-half chous, three oxybapha. Three oxybapha make three-quarters of a kotyle, and if after pouring in the choes and the half there still looked to be room for a kotyle, the measurer might have tried to put it in and discovered that only three-quarters would fit. Greek notation makes three-quarters of a unit of which one has not been recorded very difficult, so the easiest thing was to record three oxybapha.

The other graffiti appear to be indications of capacity, but because of their unusual nature interpretation can be only tentative.

60. Black-glazed oinochoe base. Pl. 3.

P 21401. Mid 5th century B.C.; *Hesperia*, XXII, 1953, p. 100, no. 139, fig. 4.

Incised under base: P P||

See Plate 3 for the form of the symbol. If it is the initial of a capacity unit, it must represent one tryblion. In *Metrologicorum Scriptorum Reliquiae* tryblion appears as another name both for the kotyle (I. 208, 222) and for the oxybaphon (I. 236, 327). But also there is the statement that "among the Athenians the choinix is called tryblion." (I. 233). The choice must be made on the basis of the capacity of an oinochoe (P 21871) with a similar base from the same well group: something over 2.200 liters. Both kotylai and oxybapha are too small to be the two tryblia here noted. But two choinikes will be 2.184 liters, so that these tryblia must be choinikes, whatever the two smaller units represented by the simple strokes may be. The fact that the choinix is a dry measure may explain why it is here called by another name. And its use as a liquid measure may perhaps be explained by the occasional need for some intermediate measure between .273 and 3.282 liters.

61. Amphora neck.

P 15053. 5th century B.C., fourth quarter.

Incised: P |||||

This is a small amphora, but there is no way of knowing if it is small enough to hold only nine tryblia of the choinix variety (i. e. three choes).

B. PRICE MARKS.

Very few certain examples have been found in the Agora. We have already seen two examples (44 and 58) on which two drachmae (or one stater)¹⁵ per chous was the standard price for wine.¹⁶ Still another example from the same well group confirms this impression:

¹⁵ The stater in both Chios and Mende, where these amphorae appear to originate, is a didrachm.

¹⁶ Because Chian wine was famous and Chian jars were presumably made to export Chian wine, it is assumed that the contents were wine.

62. Chian amphora, complete.

P 2372. 5th century B.C., third quarter; *Hesperia*, IV, 1935, p. 516, fig. 28, e.

Incised: ΠΙΙΞ i. e. seven staters.

The jar holds seven choes, so that the price is again one stater or two drachmae per chous. Literary evidence on the price of wine is scanty for this period; in connection with his publication of the Attic Stelai, Pritchett¹⁷ has collected it for this and succeeding centuries. Apparently a chous of ordinary wine, unnamed, might cost any price from two to ten obols, but Plutarch (*de tranquil. an.* 470F) tells of an expensive Chian wine which cost 50 obols for a chous in the time of Socrates. At the same time, one interpretation of the text in Stele VI, lines 60 ff. of the Profaners of the Mysteries, gives a price of four obols a chous for the Attic wine sold at auction.¹⁸ The wine which filled our jars (at two drachmae or 12 obols per chous) appears to have been rather better and more expensive (perhaps largely because it was imported) than the ordinary local or unnamed wines but not nearly so costly as that mentioned by Plutarch.

63. Chian amphora neck.

P 2367. 5th century B.C., third quarter.

Incised: ΙΙΙΙ  i. e. 14.¹⁹

The amphora belongs to the series which holds seven choes, so that the 14 is most easily interpreted as price.

Because our other apparent indications of price are much less readily comprehensible, it is good to have some notions of the approximate prices both of possible contents and of the containers themselves. The one other commodity which was likely to be sold by the amphora is oil; again the evidence for prices is scanty. Pritchett's collection²⁰ suggests usual prices varying from one to three drachmae for a chous. Oil and wine will belong to much the same category of prices for our purposes, giving a possible range of numbers up to 36 drachmae for a jar holding one metretes.

Much smaller numbers may indicate the price of the vessel itself. Evidence collected by Häckl²¹ shows that six large painted kraters cost four drachmae, i. e. four obols each. Twenty oxybapha cost one drachma or 50 cost three drachmae, giving a

¹⁷ W. K. Pritchett, "The Attic Stelai, Part I," *Hesperia*, XXII, 1953, pp. 225 ff. I am indebted to Professor Pritchett for the opportunity to consult his manuscript of the Commentary to the Attic Stelai, in which the evidence on prices is collected. This Commentary is scheduled for publication in *Hesperia*, as "The Attic Stelai, Part II."

¹⁸ The price of 104 seven-chous jars (lines 64 f.) must be restored as 520 drachmae. If the seven-chous jars sell for five drachmae each, then the three-chous jar (lines 60 f.) should go for three-sevenths of five drachmae, or just about two drachmae (i. e. four obols a chous). Such a price is made probable when the number of such three-chous amphorae (590) is multiplied by two drachmae and gives the number 1180, which agrees with the last five numbers of the total price (...HPΔΔΔ). Since the alignment is not regular at this part of the stele (cf. Pritchett's note hereon, p. 277), it is not necessary to fill both places at the front.

¹⁹ Reading by L. Talcott, *Hesperia*, IV, 1935, pp. 515-516, fig. 28, c.

²⁰ Cf. note 17.

²¹ *Op. cit.*, p. 98.

price for one of about one-third obol. As Häckl points out, this ties in neatly with Aristophanes' statement (*Frogs*, line 1262) that a very fine lekythos costs one obol. Further study of Häckl's material and some new material by Amyx²² and Jongkees²³ has not materially altered the picture for our present purpose. Evidence from the Attic Stelai may now be added: II, 41 ff., empty but presumably decorated Panathenaic amphorae are going for prices ranging from a little less than two and one-half to a little more than three and one-half obols; II, 240, empty amphorae, presumably unglazed and for re-use, are being sold in a lot of 21 for three obols, making the individual price one-seventh obol or a little over one chalkous; VII, 52 ff., three phidaknes are being sold at four or four and one-half drachmae a piece; but two others, which must be larger, are going for nine and eleven drachmae respectively. These phidaknes are giant pithoi, some of which are recorded in the Attic Stelai (II, 251) as holding 12 amphorae each.

Knowing these prices we can interpret the following graffiti with somewhat more assurance. Numbers which are beyond the range of possibility as the price of either the particular pot or its contents may be interpreted in one of two ways: 1) as the price of a shipment of pots;²⁴ 2) as casual jotting without relevance to the pot or its contents. The latter is perhaps less likely since the odd sherd would have been less cumbersome and more convenient for such a use. There may well be other explanations for some of these numbers, especially where it is not clear that the unit is one of money, but since none of them is susceptible of proof, they may perhaps best be mentioned only as a last resort in the individual case.

64. Amphora neck. Pl. 3.

P 6126. Late 5th century B.C.

Incised: ΔΓ ΙΙΙΙ ΔΓ

The four simple strokes are separated from, and more lightly incised than, the acrophonic numbers; the second ΔΓ is very uncertain. I would suggest that 15 drachmae was the price with four obols perhaps added as the price of the jar. The jar is too fragmentary to allow of a capacity estimate but appears to be of the Mendean type which range from eight to ten Athenian choes. Fifteen drachmae would be a reasonable price for the wine.

65. Amphora fragment. Pl. 3.

P 9248. 5th century B.C., last quarter.

Incised: Φ Η

This I read as ΔΔΗ or 22 drachmae and assume that such was the price of the contents, of which it is likely there were up to twelve choes.

²² Amyx, D. A., "An Amphora with a Price Inscription," *University of California Publications in Classical Archaeology*, I, pp. 179 ff.

²³ Jongkees, J. H., "On Price Inscriptions on Greek Vases," *Mnemosyne*, IV, 1951, pp. 258 ff.

²⁴ Cf. Häckl, *op. cit.*, pl. 3, nos. 595 ff.

66. Amphora neck fragment.

P 18923. 5th century B.C., last quarter.

Incised: ΔΙΙΙΙ

The lower half of the inscription is broken away so that it is not certain whether the four strokes are plain or have the cross bar of the drachma sign. In either case, although the size of the amphora cannot be known, this may represent the price. It is of course also possible that it is like **16** in using the acrophonic symbol for the large unit and simple strokes for the small; so that it might indicate not price but a capacity of ten choes and four kotylai.

Another similar fragment presents the same problems:

67. Amphora neck fragment.

P 22473. 4th century B.C.

Incised: ΔΙΙΙ

A rather different sort of price appears on the following:

68. Small black-glazed ring-handled jug. Pls. 3 and 6.

P 3512. 4th century B.C.

Incised (underneath): $\overline{\Gamma}\Delta$
┐

This may be either 61 drachmae or 60 for one drachma. The position of the numbers militates against the former. If the latter reading is accepted it must be a consignment price; 60 of something for one drachma would give an individual price of one-tenth obol. Whether the commodity was ring-handled jugs or something else on which this was hung as a tag, there is no way of telling.

69. Lower part of black-glazed skyphos. Pl. 4.

P 9177.

Incised (inside ring foot): Δ:Δ ΙΙΙ[

The unusual form of the *delta* may be seen on Plate 4. This might be interpreted as ten pots (perhaps skyphoi) for 13 obols.

These are all the pot-inscriptions which can reasonably be interpreted as price marks with any degree of conviction. One other which includes a drachma sign must be interpreted as money but is too big to be the price of a single pot or its contents and too precise to be a shipment price. It may be a simple jotting.

70. Amphora neck fragment.

P 8786. 4th century B.C.

Incised:]Τ-Ι ΗΗΗ[i. e. 300 (or more) and one drachma plus one-fourth obol.

There are other cases where numbers are written on pots which are too large to be indicative of price and not suitable for capacity marks. It is to the next category that we must look for some explanation of these.

C. INDICATIONS OF TARE AND NET WEIGHT.

Many jars of the Roman period in the Agora excavations have scratched or painted inscriptions which tell the weight of the empty vessel. These have not yet been published, but the quotation here of two sample texts will give a general idea.

Graffito: P 9806. $\delta\sigma\tau\rho\acute{\alpha}\kappa\omicron\upsilon\lambda\iota\epsilon$, i. e. (weight) of the jar: lbs. 15.

Dipinto: P 16079. $\kappa\acute{\omicron}\upsilon\pi\omicron\upsilon\lambda\iota\sigma\tau'\omicron\upsilon\gamma$, i. e. (weight) of the empty: lbs. 6, oz. 3.

The weight of the pots, which are not perfectly complete, is a fair approach to the recorded amount. The advantage of having the tare (or empty weight) recorded on the vessel is immediately apparent: by weighing the vessel when it is full of a known substance you can know without measuring how much it holds. As we know from the *Metrologici Scriptores* the weights of specific measures of wine, oil and honey were well known, so that if a jar full of wine weighs 18 lbs. and the inscribed tare is eight lbs., the amount of wine must be a chous (i. e. ten lbs. of wine).

The fact that we have more metrological evidence for the Roman period has made the interpretation of these tare-inscriptions relatively obvious. Whether the same practice existed in Greek times was rather more difficult to determine. There was some evidence, as will be seen below, but nothing that was absolutely convincing till the spring of 1954 when part of an amphora emerged from a late 5th century B.C. well that almost certainly proved the use of tare in Greek times.

71. Upper part of amphora. Pl. 4.

P 23948. Late 5th century B.C.

Incised on one side of neck: $\Delta M \Delta M M$
M

on other side: $\Delta \Delta$
MM

Consult Plate 4 for the relationship of the *delta* to the *mu*. The reading must be $\acute{\alpha}\mu$ ($\phi\omicron\rho\acute{\epsilon}\omega\varsigma$) 12 minas; 20 minas; i. e. (weight) of the amphora: 12 minas; (weight of contents): 20 minas. Unfortunately, the amphora is incomplete, nor is there a comparable jar available for weighing and measuring. The inscription itself, however, is sufficiently explicit without such corroboration.

Emboldened by this certain example we can look at other material that is suggestive of tare.

72. Chian amphora.

SS 1841. 5th century B.C., third quarter.

Incised on neck: $\Delta \Delta$

If this is a tare-inscription, the amphora should weigh 20 minas (i. e. 8.720 kg.). It is somewhat incomplete and restored in plaster; its weight is 8.640 kg.

73. Amphora neck fragment.

P 9753. Hellenistic (3rd century B.C.)

Incised: $\Delta \Delta \text{IIIIII}$

This inscription does not seem suitable as a price mark, partly because the six straight strokes can properly be neither obols nor drachmae. Because it appears to be counting units toward the end, it should be either capacity or tare; in weighing as in measuring capacity one may start with large units but must end up by adding one after another enough small units to strike a balance. We cannot be sure exactly how the weighing was done, but many of the Roman jars with tare show cumulative counting by strokes. This amphora may have weighed 26 minas.

But often, if we may judge from the treasury inventory lists, weights were recorded in drachmae rather than minas, so that we might expect to find drachma notations that record the tare.

74. Krater rim fragment.

P 5165. 5th century B.C., second quarter.

Incised on top of rim:]HHΠ

This inscription might be restored as 250, 350, 450, 750, 850, 950 drachmae etc. That a similar complete krater (P 5160) from the same well group weighs 850 drachmae is perhaps not a sufficiently compelling reason to interpret this as a tare inscription, but it is difficult to imagine what else it might be.

The two following inscriptions (and also the vessels) are too fragmentary to tell us much. Only the size of the number suggests that it may be tare.

75. Amphora neck fragment.

P 5933. Hellenistic (3rd century B.C.)

Incised:]HΔΔΔ[

76. Amphora shoulder fragments.

P 7447. 4th century B.C.

Incised: ΓHHH[]ΔΔΓ[

A rather different problem is presented by the next.

77. Small black-glazed pyxis lid. Pl. 4.

P 9809.

Incised on top: ΔΗΗΗ

See the illustration on Plate 4 for the form of the symbols. Fourteen drachmae cannot be the price; it is far too large. The use of drachmae forces us to assume either a casual financial jotting or an expression of weight. It does not seem casual enough for the former and I would prefer to believe that the little box was used to hold some fairly expensive cosmetic or ointment which was sold by weight. When it needed refilling it was taken to the perfumer's shop where it was filled and weighed full. The number of drachmae over 14 would then be the contents and for these the buyer would pay. The lid itself weighs four drachmae; if the box was two and one-half times the lid in size the total would be 14. Unfortunately no complete examples of this sort of pyxis have been available for weighing.

78. Black-glazed bolsal.

P 7441. 4th century B.C.

Incised under foot: ΔΔΔΠ

The number might have almost any significance but the fact that about one-third of the cup is missing and the remainder weighs 24 drachmae makes it at least possible that 36 drachmae was the weight of the whole.

NUMERICAL NOTATIONS ON SHERDS.

Where numbers were written on a potsherd rather than on a pot, most of the possible interpretations used in the category above are no longer valid since neither weight nor capacity is relevant. The number may still be a price mark—now in the form of a detachable price tag—and other interpretations also become possible. The number may be jotting either for calculation or memory. It may also be for keeping count (e. g. when measuring a pot that must not be marked up) or keeping score in games. Simple counting might be done by this stroke-marking; more complicated counting and simple arithmetic could be done better with a counting board or abacus.

Of these latter we have two examples. These are not the formal stone counting-tables like that found in Salamis (*I.G.*, II², 2777) or those in the Amphiareion ('Αρχ. Ἐφ. 1925-6, pp. 44-45), but the roof tile fragments which have been converted into informal counting boards by having the numbers scratched on them so that the pebbles could be added or subtracted from any particular number. An example of this sort was found in Eleusis (*I.G.*, II², 2780). One can imagine the sort of situation in which one of these might be made and used: a man involved in some kind of business transaction which requires arithmetic beyond what he can do in his head or on his fingers (ἀπὸ χειρός Aristophanes, *Wasps*, 656) takes up a large fragment of tile, scratches the numbers (ΧϞΗϞΔΓΗICTX) in a row and picks up a handful of pebbles to serve as counters. Then by adding or taking away pebbles he can perform most arithmetical functions with ease and dispatch.

79. Roof tile fragment. Pl. 4.
P 12317. Late 5th century B.C. (disturbed context).
Incised:]ΓΗICT

80. Roof tile fragment.
A 782. End of 5th century B.C.
Incised:]ϞΗϞ[

We have one example of what must be a price tag, since it has a hole chipped in its center so that it may be tied onto the object priced.

81. Base of black-glazed bowl or plate. Pl. 4.
P 6876. Late Hellenistic.
Incised on floor: ΔΓΗΗ

The numbers were incised with relation to the broken edge and so show that the inscription was made on the sherd.

Another price tag or perhaps bill of lading:

82. Black-glazed rim and handle fragment. Pl. 4.
P 16981. Late 5th century B.C.
Incised around edge of sherd: κεράμος ΔΔΔΔΓ[

The handle (not visible in the illustration) again makes for convenient attachment. The closeness of the Γ to the edge suggests that part of the original sherd has been broken off so that the original number may have been anything from 45 to 49. That *κεράμους* is accusative plural seems likely, and this suggests that the number is not a price but a record of the shipment; perhaps a lot price followed. What may be another example of a tag seems to have been re-used as an ostrakon. It is a kylix foot (P 2734, *Hesperia*, XV, 1946, p. 272, no. 8) on which are inscribed both the number '50' and the name of Kallixenos, son of Aristonymos. Since there is no parallel for a number on an ostrakon, the number should belong to a previous use either of the sherd or of the kylix. It is difficult to imagine why so large a number should be written on the kylix; but once the foot was broken off, the resulting hole would have made it an admirable tag to be attached to a shipment comprising fifty objects or to something priced at fifty drachmae.

Counting may be seen in another inscription which was written with relation to the edge of the sherd.

83. Unglazed amphora fragment. Pl. 4.

P 7404.

Incised: HHHHHHHHΔΔΔΔ
Δ||

The listing of hundreds and tens without making use of the signs for 500 and 50 makes this appear to be counting; the use of the simple stroke rather than the drachma sign suggests that it was not money which was being counted.

84. Base fragment of black-glazed skyphos.

P 14847. Late 5th century B.C. (disturbed)

Incised:]|||||||
]|||
]Γ[

Some sort of counting seems to be involved, but the piece is too fragmentary to interpret further.

85. Black-glazed sherd.

P 916.

Incised on what was inside of pot:]XXXX[
X

Although it is possible that the numbers were written on the sherd rather than the pot (because they are inside and seem to follow the edges of the sherd) it is not certain that we have the whole of the original sherd. This looks like counting and might well be the tallying of choes being poured into a jar.

A good example of a sherd which has been used merely to record a number is the following, where it is immediately apparent that the inscription was made on the sherd.

86. Wall fragment from large semi-glazed krater. Pl. 5.

P 12214. 6th to late 5th century B.C.

Incised on inside: Π++++
ΠHHHH
ΠΔΔΠ

Consult Plate 5 for the forms of the symbols. What this large number (9975) may refer to we can not even guess.

Several other small sherds preserve inscribed numbers, but whether the inscription was made on the sherd or on the pot is not certain. Without that information it is almost impossible to decide among possible interpretations. The lamps (93-95) are especially puzzling, since one can imagine no possible reason to record such numbers on the underside of a lamp, at least while it was in use.

87. Small black-glazed sherd.

P 250.

Inscribed on outside:]ΔΔ[

88. Black-glazed sherd.

P 5979.

Incised on outside:]ΗϞΔΔΔΠ[

89. Tile fragment.

P 7285. 5th century B.C., second half.

Incised: ϞΔΔΠ

90. Saucer fragment.

P 17285. 4th century B.C.

Incised:]HHHH[

91. Plate fragment.

P 17539. 4th century B.C.

Incised on floor:]ΔΔΔ

92. Black-glazed skyphos base. Pl. 5.

P 23733.

Incised underneath:]ΤΗΗΔΔΔΔ
]ΛΗΔΔΔ
]ϞΔΔΔΔ

93. Greek lamp fragment. Pl. 5.

L 3068.

Incised on underside of foot: ΔΠΙΙΙ ΔΗ

This lamp will be published as No. 280, pl. 23 in R. H. Howland, *Athenian Agora*, IV, *Greek Lamps*.

94. Greek lamp base.

L 3496. 5th-mid 4th century B.C.

Incised underneath:]Η ϞΔΔΔ

This will be published as No. 219, pl. 22 in R. H. Howland, *Athenian Agora*, IV, *Greek Lamps*.

95. Greek lamp base.

L 4133.

Incised underneath: ϞΗϞΔΔΔΔΠ

This will be published as No. 300, pl. 23 in R. H. Howland, *Athenian Agora*, IV, *Greek Lamps*.

For the sake of completeness it seems good to include here eight other vase-inscriptions which make use of numerical notation, even though little or no explanation can be offered.

96. Shoulder fragment of an unglazed pot.

P 3771. Early Roman.

Incised:]apor ΔΠ

This is 15 of something in the genitive plural, but whether it is price, contents or weight is difficult to tell.

97. Amphora handle fragment.

P 10416. 4th century B.C., second half.

Incised: $\frac{o}{\equiv}$

Two possibilities may be suggested: 1) in a system in which *o* was ten and the stroke one, it might be read as a price of 14 drachmae; 2) where *o* stands for obol it might be four drachmae and one obol. The first requires that an Argive have written it; the second, though possible for an Athenian, seems too low a price for the contents of an amphora and too high a price for the amphora itself.

98. Amphora neck fragment.

P 7444. 4th century B.C.

Painted in red: EY
ΔΔΠ[

EY must be an abbreviation, perhaps of a name, perhaps of contents. The number is more difficult to interpret because it is painted rather than incised. It may, however, be comparable to tare graffiti such as Nos. **72-73**.

99. Small shoulder fragment of coarse pot. Pl. 5.

P 14576. Mid 4th century B.C.

Incised:]ΙΦΗ[

Here even the reading is difficult, and the fragmentary nature of pot and inscription seem to make interpretation impossible.

100. Small stemmed bowl. Pls. 5 and 6.P 14973. Early 5th century B.C.; *Hesperia*, IX, 1940, p. 274, fig. 9.

Incised under foot: ΠΚΚΚ

This inscription, if found on a larger vessel, would be a capacity notation of five choes and three kotylai. Here the meaning is not at all clear unless it is to be regarded as the jotting of some other vessel's capacity.

101. Large wide-mouthed jar. Pls. 5 and 6.

P 23681. 5th century B.C., second half.

Incised on shoulder: Η
on other side: ΠΗΗ

These numbers, although they appear to say something about the jar, do not fit in with any of our categories, mostly because the jar itself is so different.

102. Base fragment of black-glazed bolsal. Pl. 5.

P 17013. Late 5th century B.C.

Incised around under foot:]ΗΔΓΧ[

The first three letters are certainly 111 drachmae. The next symbol to the right may perhaps be read as three simple strokes joined together at their base, i. e. three obols. The Χ, being on a larger scale, may begin the inscription or may be completely extraneous.

103. Wall fragment from an unglazed amphora.

P 17059. 5th-4th centuries B.C. (disturbed).

Incised: $\left. \begin{array}{c} \Delta \\ \Gamma \end{array} \right| \text{OK} \left[\right.$

The *delta* is attached to the bottom of the left vertical stroke of the Γ . The first line may be part of a name. The second must be a number, but how it is being used we do not know.

CONCLUSIONS:

There seems little point in detailing particular conclusions, partly because the material presented is so various and partly because it speaks for itself. But certain general remarks may be made (1) about the lack of standardization in numerical notation, (2) about the domestic and economic situation implied in the notations, and (3) about the chronological distribution of these acrophonic notations.

The apparent lack of any standard system indicates to me an actual lack of numerical standardization such as we would expect where there was no universal primary education and still considerable choice in so standard a matter as spelling. Monetary notation was standardized by virtue of being a subject of official importance. But notations of capacity were made unofficially in the home or the market place, two strongholds of rugged individualism. They were made by people with a variety of backgrounds, foreign or servile, native or free.

Just as the lack of standardization is what we might have expected with no specific evidence at all, so the information about commercial practices implied in the graffiti exactly coincides with what it would have been reasonable to suppose without it. We know that already in the 5th century amphorae were being made in standard sizes for the shipping of wine and perhaps oil. But it also seems likely that these containers could not be made so as to hold no more and no less than a guaranteed amount; all that could be asked for by the purchaser was a jar filled with the number of choes he was paying for. That is, the jar must be made to hold at least a certain amount; and what with calculations of diameters and shrinkage they must often have been made bigger to provide a margin for error. And so an Athenian bought a jar of Chian wine knowing that he was getting seven Attic choes of wine, but not knowing exactly how much more the jar would hold. But having finished the expensive Chian wine, he was perhaps obliged to economize and buy cheap wine—that the wine shop had in bulk, because it was not worth the expense of putting it into jars. And so, like a modern Athenian who buys cheap or local produce rather than imported or “brand names,” he would take his own jar. What better than the Chian jar which was as good as new and would serve as evidence to whom it might concern that he was buying cheap wine because he liked it and not because he could not afford Chian. But because he wanted to be sure how much wine he was getting from a wineshop keeper who was not transparently honest, he first measured the jar, either by weight or measure. Or even when there was no question of the shopkeeper’s honesty and the same Chian jar

was sent back to the shop every week to be filled, the jar may have been marked by both customer and merchant to save time and trouble.

Our hundred and three examples extend over seven centuries, but the vast majority of them belong to the 5th and 4th centuries. It is not surprising that the earlier period is comparatively unproductive of numerical notations, but the scarcity in later Greek times is sufficient to provoke comment. The explanation of this scarcity must lie in change from acrophonic numbers to alphabetic. Whether the alphabetic numbers increase during this period is difficult to know, mostly because it is virtually impossible in the case of single letters to distinguish between a letter as letter and a letter as number. The last use of the acrophonic which we have belongs to the early Roman period, by which time alphabetic numerals were being regularly used both in formal and informal inscriptions.

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ARCHAIC GRAVESTONES FROM THE ATHENIAN AGORA

(PLATES 7-11)

THE beautiful Attic gravestones of the sixth century B.C. are cherished even in fragments, for they hardly ever survive intact. Ancient tomb-destroyers, ancient and later builders, and modern traders in antiquities have combined to break and scatter them. The very nearly complete stele of a boy and his sister in the Metropolitan Museum of Art in New York gives us some idea, however, of the magnificence of these memorials of the wealthy families of Attica, and the dramatic story of the recovery of its various parts reminds us that other such connections may be possible.¹ The bits of such monuments that have been unearthed in the excavations of the Athenian Agora are even more shattered than most, but since they have the advantage of a known provenance they all seem worth including in the body of published examples.² Most of them must have stood originally in the cemeteries outside the city gates to the northwest of our area.³ By and large the gravestones found in the Agora have been brought in as building stones, and some may have been re-used several times in this capacity. Their history explains their lamentable state of preservation. Nevertheless, at least one fragment, E, can still be enjoyed esthetically, and none of the others is without interest for the development of the type.

A. Fragment from the right edge of a stele showing in relief part of a left hand grasping a staff. Pl. 7, b.

Inv. S 1751. Found July 9, 1953, in a marble pile behind the north end of the Stoa of Attalos (R 7). Fine-grained, pale gray Attic marble with thin bands of darker gray. Pres. H. 0.102 m.; Pres. W. 0.085 m.; Th. at edge 0.093 m.; Max. Pres. Th. (at base of thumb) 0.101 m.

¹ G. M. A. Richter, *Catalogue of Greek Sculptures in the Metropolitan Museum of Art*, Oxford, 1954, no. 15, pp. 11-13, pls. 15-18; *Archaic Attic Gravestones*, Cambridge, Mass., 1944, figs. 11, 73-79, pp. 64-74; the story of the reconstruction in *A.J.A.*, XLV, 1941, pp. 159-161.

² Two fragments, C and E, have been published already but are included here for the sake of one or two interesting details that have not been noted before. I am indebted to the field director and staff of the excavations of the Athenian Agora for help in many ways. The photographs of Agora fragments are by Alison Frantz, those of objects in the National Museum by G. Tzimas. Thanks are due to Mr. and Mrs. Christos Karouzos for making the gravestones in the National Museum available for study and for the permission to publish photographs of two fragments and to Mr. Markellos Mitsos for permission to publish photographs of a stele in the Epigraphical Museum. I am especially grateful to Miss Lilian H. Jeffery for giving me freely the benefit of her extensive and thorough knowledge of archaic sepulchral inscriptions. She is my authority for all opinions on the dates of letter-forms.

³ The stele of Theron, C, is an exception, since it was brought in from elsewhere by Fauvel. See below p. 27.

The fragment preserves the side surface and some of the original back; it is broken at the left and above. A bit of the relief background preserved below the hand curves out to the edge of the stele, which is mostly chipped away. A bit of the original surface of the border seems to be preserved beside the knuckles of the little and third fingers. The side of the shaft is carefully smoothed, while the back has been dressed with the drove, the marks slanting down toward the preserved edge. The back and side are somewhat weathered and there is an iron-rust stain on the side. The front is battered but not heavily weathered. No traces of color remain. The fragment shows two fingers and the tip of a third, grasping a cylindrical staff. To the left of the fingers appears part of the high mound at the base of the thumb. The little finger is not differentiated from the others in thickness or in length, and there is no indication of the joints or nails on any of the fingers.

B. Fragment from the lower right-hand corner of a finial. Pl. 8, a and b.

Inv. S 1438. Found January 1950 in the Stoa of Attalos area (Q 8), among marbles left by the nineteenth century excavators. Fine-grained, gray Attic marble banded with darker gray, the plane of banding being approximately vertical and slanting somewhat back to the right from the face of the stone. The break at the back is along this plane. Pres. H. 0.165 m.; Pres. W. 0.26 m.; Pres. Th. 0.075 m.

The piece is broken above, at the left, at the back, and on the right side above the leaf band. Reddish mortar adheres to all surfaces. The under side has an anathyrosis (chisel border, point-work inside) and the remains of a wide cutting for dowel or tenon which begins 0.113 m. from the right edge and 0.035 m. from the front face (Pl. 8, a). Only the front wall of this cutting is preserved, so that it is impossible to obtain its exact dimensions, but it must have been at least 0.07 m. deep and 0.12 m. long. It appears to be centered roughly on the fourth leaf of the lower border, counting from the right.

The face of the finial is flat, with incised and painted decoration: a band of leaves along the bottom and the remains of a volute above it at the right. Of the colors only the red has survived, the presence of other colors being marked only by a slightly raised surface where the paint has protected the marble from weathering. How many and what other colors were used remains uncertain. The main outlines of the pattern were incised, and on the analogy of other examples we may imagine that these lines were filled with black. An alternative would be red. Some filling would be necessary, since the incisions often fall between areas or strips that were left in the color of the marble. Alternate leaves, beginning with the outside one, were painted red. The other leaves may have been black, blue or green. The lower parts of the leaves are marked off by an incised line into a band 0.015 m. wide. In this the lines of the reserved borders of the leaves are continued downward as vertical incised strokes, while the reserved centers seem to have continued down but without incised outlines. There is no visible trace of red remaining in this band, so that we have no clue as to how it was colored. In the restored drawing we have used a simple alternation of the leaf colors. Above the leaves was a red band 0.011 m. wide bordered by reserved lines and incisions. Above this and inside the volute the whole preserved surface seems to have been painted in one color (probably black or blue). There may have been an inverted palmette in the lost area above this. The spiral of the volute is reserved and its eye red.

The side of the finial is not smoothed but dressed with the drove in carefully horizontal strokes. From the bottom it tapers slightly inward, but near the top of the leaf-band it begins to curve out. This curve would doubtless have continued only to the level of the red band, which would have been cut off vertically below the spring of the volute. Part of the incised outline of one leaf, of approximately the same width as those on the front, is preserved on the side. No trace of color remains on the side but the differences in the surface show that the side leaves also were painted. If we restore two leaves on the side, the thickness of the finial at the bottom will have been *ca.* 0.102 m. This is just adequate to take care of the dowel hole, which should have had a minimum width of about 0.03 m. The centering of the dowel hole on the fourth leaf and the necessity of an odd number of leaves in order to give symmetry in the colors suggest that the face was seven leaves wide, which would give a restored width of 0.36 m.

C. Lower part of stele of Theron. Pl. 9, d.

Inv. I 2056. From a stele originally found in March, 1819 by Fauvel in excavations near the modern Glyphadha.⁴ Fauvel's house, in the area of the ancient Agora, was destroyed during the Greek War of Independence. The surviving fragment was refound October 31, 1934 in the demolition of a modern house in the central part of the Agora (O 12). Fine-grained white Attic marble with a few darker streaks. Pres. H. 1.465 m.; W. at base 0.485 m.; Th. at base (left side) 0.15 m.; (right side) 0.14 m. The stele tapers, the width diminishing 0.036 m. per meter of height, the thickness 0.019 m. The left side is about 0.01 m. thicker than the right all the way up.

The top part of the stele has been broken away. There are traces of mortar and whitewash on the face. The right side of the face is somewhat worn, enough to obliterate the first letters of the name but not the incised lines of the borders. The bottom is preserved except for chips off the lower right-hand corner and along the lower front edge adjacent to the right side.

The front face was dressed smooth except for a border down each side, marked off by two deeply engraved lines. The strip between the lines is carefully smoothed and shows faint traces of red paint. The border outside the strip on each side retains marks of the drove. The strips and the borders outside them taper as the stele does. The sides of the shaft are carefully smoothed and the back dressed with the drove. At the bottom the line for setting the stele into its base is marked by a narrow stripe of red paint that runs all the way around the stele, 0.085 m. from the bottom of the stone. Below this the surface is more roughly dressed, with the drove on front and sides, with the claw chisel on the back. From 0.41 m. to 0.46 m. above the bottom of the stele is the name [Θέ]ρονος, inscribed retrograde. The last four letters are quite clear, the third visible only in traces. The inscription must have been somewhat off-center toward the left. There is no trace of the box-like enframing of the inscription shown in Vulliamy's drawing. If it existed it must have been in paint only.

The Agora fragment published by G. M. A. Richter, *Archaic Attic Gravestones*, p. 94, figs. 89, 90. The original stele: Conze, I, no. 23 (with earlier literature; add L. Dupré, *Voyage à Athènes et à Constantinople*, Paris, 1825, pl. XIX = our Pl. 9, a and b). The inscription: *I.G.*, I², 994.

D. Fragment from the top of a shaft. Pl. 10, c.

Inv. S 1736. Found early in 1952 at a high level (presumably modern) south of the Church of the Holy Apostles (O 16). White Attic marble. Pres. H. 1.045 m.; W. at top 0.355 m.; at bottom 0.40 m.; Pres. Th. at top 0.127 m.; at bottom, 0.117 m.

Top and sides original. Back original but somewhat worn from use as a threshold block. There is a pivot hole near the top of the block and a hole for the center stop near the break below. The shaft is broken off at the bottom in a roughly horizontal line that passes just below the head of a man represented in relief. The length of the threshold block if restored to the full width of the double door would take us only to about the man's knees. Hence the lower part must already have been broken off before the period of re-use as a threshold.

The whole front surface except for a band 0.045 m. wide at the top and the concave background of the relief below has been roughly picked away, possibly in order to eliminate the taper of the stone and make it suitable for a wall block. The background of the relief, which curved out in the usual way to the top and sides, is first visible 0.764 m. below the top of the shaft, and the actual upper line of the panel cannot have been much above this. None of the sculptured surface of the man's head has survived and much of its outline has also perished. Plate 10, b and c shows as much of it as can be recovered. The stone is weathered and cracked, and there are brown stains and mortar on the front, reddish brown patina on the left side.

⁴ The provenance is revealed by Fauvel in a letter of April 11, 1819, in which he describes his recent excavations and some of his finds. For the reference to the letter and the identification of the site of Fauvel's excavations I am indebted to C. W. J. Eliot, who will discuss them in his forthcoming study on the coastal demes of Attica.

The relief panel represented a man facing right. The apparently pointed outline of the chin suggests that he was bearded, and the smoothly concave line at the back of the neck suggests a helmet, but the offset above the forehead shows that it cannot have been a Corinthian helmet. Also there is no sign of a crest; it is more likely that we have merely an unusually smooth hairline instead of a helmet. Little can be said of the profile except that the nose continues approximately the line of the forehead and that the upper lip, as usual, was very short.

The sides of the stone are carefully smoothed, and apparently the back also, as far as one can tell from its present worn surface. What survives of the front surface along the top edge of the shaft is likewise carefully smoothed. There is nothing to indicate what occupied the area above the main picture panel. There are marks of the drove and traces of red paint on the background of the relief. The top of the shaft has anathyrosis and a cutting 0.09 x 0.035 m. and 0.055 m. deep, approximately centered, for the reception of the dowel by which the finial was attached.

E. Fragment of a stele representing a man and his dog. Pl. 11, f.

Inv. S 1276a. Found July 2, 1947 in the curbing of a Turkish cesspool at the southwest corner of the market square (I 12). Fine-grained white Attic marble with thin gray bands (banding approximately vertical on the sides of the shaft, slanting back slightly from left to right). Pres. H. 0.34 m.; Pres. W. 0.305 m.; Pres. Th. (total) 0.22 m.; Pres. Th. below feet 0.204 m.; Pres. Th. of edge beside legs 0.18 m.

The piece is broken at the top and on the right side, probably also below. The back and bottom surfaces are deeply eroded from the acids of the cesspool, but the slab may have nearly its original thickness. In the back, about 0.25 m. from the left edge, are the remains of deep holes made to assist in breaking up the stone. These probably mark the approximate half-width of the shaft.

The fragment shows the feet of a man wearing light sandals and behind him the heavy curling tail of a dog. The relief is relatively high and the fronts of the legs are deeply offset from the background. The man's flesh is polished; the background and the dog's tail have a matt finish. The background does not curve out to the side to form a frame for the picture. Instead, there was a flat painted border whose pattern can still be made out (Pl. 11, e). A strip about 0.035 m. wide has been reserved in the color of the stone. On it is traced a battlement-maeander formed by opposing rectangles outlined in red and with the center-line of the maeander painted in some color (probably black or blue) that has now disappeared.

H. A. Thompson, *Hesperia*, Supplement VIII, pp. 373-377, pls. 51-52. K. Friis Johansen, *The Attic Grave-Reliefs of the Classical Period*, p. 110.

These are the Agora fragments. In order to visualize the monuments from which they came and to know when they were made one has to consider the better preserved and better known examples to which they are in various ways related. Miss Richter in her study of the archaic Attic gravestones has laid down a simple and lucid framework for their classification and approximate dating.⁵ She recognizes only two basic structural types: I, the stele with separately attached capital, and II, the stele with a finial in one piece with the shaft. Stelai of class I were regularly surmounted by sphinxes, those of class II by palmettes. Class I is thought to have been replaced by II around 530 B.C. The stele of Theron, C, which had a separately attached palmette, is explained as a transitional example. The volute-palmette finial is supposed to have been adopted as a result of Ionian influence, which led first to a compromise form of type I in which the cavetto base for the sphinx was replaced by a lyre-shaped double-

⁵ *Archaic Attic Gravestones*, Cambridge, Mass., 1944.

volute capital. This elaborate form, exemplified by the brother-and-sister stele in New York and a volute capital with sphinx in Boston,⁶ went out of use, Miss Richter thinks, as the result of an anti-luxury decree which prohibited the construction of grave monuments that required more than three days' labor for ten men.⁷ Thereafter the palmette carved in one piece with the shaft became the standard finial. The type with double volutes supporting the palmettes is thought to be earlier than that with single volutes, since it is closer to the lyre form. These changing types provide a framework for a chronological division into quarter-centuries. The first half of the sixth century is dominated by the cavetto-sphinx capital, with only the very earliest examples dated before 575. The third quarter contains the transitional lyre-sphinx capitals and the earliest palmettes. In the last quarter we find only palmettes carved in one with their shafts.

The Agora fragments do nothing to clarify this almost too clear picture. At most they suggest some blurring of the outlines, some possibility of overlap of forms in time that may make it more difficult, if anything, to date a given piece. The eventual replacement of the sphinx capitals by palmettes seems an undisputed fact. The question is only as to how this took place. The attribution of the luxury decree to Peisistratos is not universally accepted,⁸ and it may be better for the moment to omit it from the list of proven theorems as we examine the Agora material and its relation to the development as a whole.

The hand, A (Pl. 7, b), agrees in the marble, the thickness and the finish of the side and back with a stele in New York⁹ which has been tentatively associated with the

⁶ See below, p. 41 and note 54.

⁷ *Gravestones*, pp. 90-92; *A.J.A.*, XLIX, 1945, p. 152. The tradition is preserved in Cicero, *De Legibus*, II, 26, 64: sed post aliquanto propter has amplitudines sepulchrorum, quas in Ceramico videmus, lege sanctum est, "ne quis sepulchrum faceret operosius quam quod decem homines effecerint triduo"; neque id opere tectorio exornari nec hermas, quos vocant, licebat inponi. "Post aliquanto" means "some time after" Solon. The passage as a whole sounds as if it referred to the actual construction of the tomb, the mound or the rectangular structure, which might be done quickly by a large number of men, rather than to individual elements such as stelai or statues, which would naturally be made over a long period by a single sculptor with one or two assistants. For the distinction between the tomb and the stele, cf. the inscription on a stele in Liopesi from Kalyvia Kouvara:

Τόδ' Ἀρχίο 'στι σῆμα: καδελφῆς φίλης:
Εὐκοσμίδης: δὲ τοῦτ' ἐποίησεν καλόν:
στέλεν δ' ἐπ' αὐτοῖ θεκε Φαίδιμος (σ)οφός.

(Pezopoulos, *Ἀρχ. Ἐφ.*, 1937, pp. 538-541, fig. 1; Peek, *Ath. Mitt.*, LXVII, 1942 [publ. 1951], pp. 85-87, no. 140). Presumably Eukosmides paid for the erection of the whole tomb over which stood the stele made by Phaidimos (cf. Karouzos, *Epitymbion Chr. Tsounta*, p. 543).

⁸ Cf. Johansen, *Attic Grave-Reliefs*, p. 121, note 1.

⁹ Richter, *Catalogue*, p. 10, no. 13, pl. 14 a (with complete bibliography); *Gravestones*, pp. 43-46, figs. 62, 64.

base of Chairedemos signed by the sculptor Phaidimos.¹⁰ It is the lower part of a shaft in "Hymettian," that is, gray Attic marble representing a nude youth holding a staff. No other known stele coincides with the Agora piece in all these features. There is no direct join, for the wrist is not preserved on either stone, but the correspondences are too many to be due only to chance. The dark bands in the marble when checked on the New York stele from a measured drawing of the Agora fragment prove to have the same direction and spacing. The thickness of the staff and its distance from the edge are such that both staff and edge are correctly aligned with those of the New York stele when the hand is placed at a reasonable distance above the elbow. This could be ascertained by means of a plaster cast of the Agora fragment which was sent to New York and tentatively placed on the stele (Pl. 7, a).¹¹

The peculiarities of pose and style in our hand are also appropriate to the New York stele as to no other now known. It is the only one in which the whole forearm is held so far forward that part of it is overlapped by the staff. Correspondingly, the Agora hand is the only one on which so much of the hand appears on the other side of the staff below the little finger. One is struck by the artist's failure to indicate the fingernails. It might be thought that the fingertips were meant to be curled out of sight around the staff, though I know of no other example of this on extant reliefs. The New York stele likewise fails to mark off the nails on the toes and on the thumb of the right hand.¹² The warrior on the stele with Gorgon panel from the Themistoklean Wall (Pl. 10, a),¹³ dated in the same quarter-century with the New York youth, has the nails very carefully delineated and the wrinkles at the joints of the fingers represented by groups of incised lines. Our artist's neglect of the nails is thus more likely due to lack of interest than to earliness. The toenails of the kore by Phaidimos (of which only the feet survive)¹⁴ are summarily rendered, and this is one of the arguments advanced for attributing the New York stele to Phaidimos.

In general the Gorgon stele appears to be an earlier work than ours. Miss Richter compares both to the kouroi of the Tenea-Volomandra group, but the heavy thighs of

¹⁰ Richter, *Catalogue*, p. 10, no. 14, pl. 14 d; *Gravestones*, pp. 43-44, fig. 65.

¹¹ I am most grateful to Miss Christine Alexander and Mr. Dietrich von Bothmer of the Metropolitan Museum for comparing the cast with the stele and arranging the photograph of the cast tentatively in place, as well as for further details concerning the stele itself. Those who test the photograph with a straightedge will see that the position of the cast has shifted slightly prior to photographing so that both edge and staff are slightly more vertical on the fragment than on the stele.

¹² Dietrich von Bothmer observes that though there is no incised outline for the nails on the New York stele the surface has been differentiated by using the finishing tool in a different direction. Since no such difference is observable on our hand, the possibility remains that we are seeing the second joints only.

¹³ Athens, N. M. 2687. *Gravestones*, pp. 41-43, fig. 61; Noack, *Ath. Mitt.*, XXXII, 1907, pp. 514-541, pl. 21.

¹⁴ Athens, N. M. 81; *Gravestones*, pp. 44-46, fig. 63; Eichler, *Jahreshefte*, XVI, 1913, pp. 86-102; *I.G.*, I², 1012; Peek, *Ath. Mitt.*, XLVII, 1942, pl. 4.

the New York youth suggest affinity with the succeeding Melos group, whereas the slender, sharp-shinned youth on the Gorgon stele is an exact counterpart to the Volo-mandra kouros. The legs on a fragment in the National Museum (Pl. 7, d)¹⁵ which in all probability belongs to the Diskophoros (Pl. 7, c) also seem less advanced than those of the New York stele. The fragment has the same straight shins with an angular offset from the background that we find in the Gorgon stele. Those of the New York youth have a slightly curved front line and the front edge is rounded off. Also the modelling of the calf on the fragment, with its two ornamentally placed grooves, is less naturalistic than that on the New York youth. Thus the latter, while it may still belong to the second quarter of the century, appears to be one of the latest in its group. The technical details tend to reinforce this impression.

The drove-finished back of the New York stele is less usual than one might suppose on Attic stelai, considering the popularity of the drove in the sixth century.¹⁶ One reason may be that it is tedious to dress a large surface with carefully parallel strokes (and a drove-finished surface in which the strokes were not parallel would be most unattractive). I have found only three other examples: the stele of Theron, a

¹⁵ N. M. 83. Conze, I, no. 12. The fragment is so strikingly like the Diskophoros in marble and finish that one would be tempted to link the two even if there were no other indication that they belonged together. As it happens, they were both found at the Dipylon, about 15 meters apart (according to Koumanoudes, *Ἀρχ. Ἐφ.*, 1874, p. 484) and were originally published by Koumanoudes (*loc. cit.*) and by Kirchhoff and Curtius (*Abh. Ak. Berlin*, 1873, pp. 156 ff.) as belonging together. Unfortunately Koumanoudes tried also to associate with them an inscribed base (*I.G.*, I², 986) which was found with the legs, bearing an epigram to the dead Xenophantos. Since this was clearly, from the cutting in its top, a kouros-base, it had to be separated from the Diskophoros, and the separatism carried off the legs also. Over-refined (and insufficiently observant) scholarship found other reasons to reject them; Conze affirmed that they did not belong, and so they passed out of the literature. It seems time to re-introduce them. The objections to the association are not cogent. Körte states that "the width of the preserved left edge differs by 0.01 m." (*Ath. Mitt.*, IV, 1879, p. 272, note 1). Actually the edge is preserved only on the fragment with the legs, which has a thickness of 0.16 m. It is a sharply out-curved edge with a border only 0.009 m. wide. On the head fragment the fine edge has been broken away. To restore its curve as it is on the other fragment would add about 0.01 m. of thickness at the side. Since the present thickness of the head fragment on the left side is 0.136 m., there remains 0.014 m. to be accounted for by the taper of the stele. This is about what we should expect for the meter or more of height which would intervene between the two fragments. (A survey of a number of archaic stelai shows the taper in thickness ranging from 0.009 m. to 0.020 m. per meter of height). Conze (p. 6) speaks of the "different relief-technique" of the two fragments, but without explaining what he means by this. In fact there is a marked similarity. The back of the leg with its bevelled edge, offset only slightly from the background, may be compared with the treatment of the hand against the background and the lower part of the face against the diskos, while the greater depth of offset at the front of the leg is comparable to that of the back line of the hair. The marble in both pieces is very fine-grained, its color a bluish white like skimmed milk, with faint dark streaks running vertically up the sides of the slab. It tends to break in layers, which are parallel to the back of the slab. It is finished with a very fine abrasive, the back almost as carefully as the sides and front. The fragment with the legs retains considerably more of the red color of the background than does the head fragment.

¹⁶ On the use of the drove, see Richter, *A.J.A.*, XLVII, 1943, pp. 188-193.

smaller inscribed stele in the Epigraphical Museum in Athens (Pl. 11, b),¹⁷ and fragments of a plain (perhaps once painted) stele in Markopoulo.

This question of the finish of the back and sides is interesting and probably has some significance for the determination of dates and workshops, though it could never serve as an absolute criterion. Miss Richter suggests that it might vary according to the taste of the workman.¹⁸ We might say rather according to the standard of quality he was expected to meet, which would depend on two things: the taste of the times and the price of the job. The possible degrees of finish from smooth to rough are: (1) smoothing with abrasive (2) drove-work (3) claw chisel and (4) point.¹⁹ If there is any distinction between sides and back, it is naturally the sides that get the more careful treatment. The back, being a larger area, seems less subject to variation according to taste and so has been taken as the more significant element. The following list, in which Miss Richter's dates are cited for all items that appear in her catalogue, gives some idea of the popularity of different kinds of finish in different periods.²⁰ The material is marble unless otherwise specified.

Back and sides dressed smooth

Buschor stele, Athens, Kerameikos Museum, <i>Gravestones</i> , fig. 37 (poros stuccoed)	600-575 B.C.
Swordsman, Kerameikos Museum, <i>Gravestones</i> , fig. 55 (poros stuccoed)	575-550
Diskophoros, Athens, National Museum 38, <i>Gravestones</i> , fig. 57	575-550
Incised head, Berlin, <i>Gravestones</i> , fig. 58	575-550 ²¹
Gorgon stele, Athens, N. M. 2687, <i>Gravestones</i> , fig. 61	575-550
Noack fragment, Athens, N. M. 2825, <i>Gravestones</i> , fig. 59	575-550
Boston athlete, <i>Gravestones</i> , fig. 56	575-550

¹⁷ See below, pp. 38-40.

¹⁸ *Gravestones*, p. 49. Miss Richter did not have access to the material in Greece at the time this book was written and so did not realize how many Attic stelai are smoothed on the backs.

¹⁹ One can sometimes see these as successive phases on a single piece of work, e. g., smoothing over drove-work on the Noack fragment and the New York youth, drove over claw chisel on a palmette stele in the Metropolitan Museum, *A.J.A.*, XLVII, 1943, p. 190, fig. 6.

²⁰ I include only shafts and fragments of shafts, since capitals are not necessarily finished in the same way as their shafts. Of the pieces listed by Miss Richter as being in Athens the fragment of a large stele with the effaced head of a warrior (*Gravestones*, fig. 10) is the only one I have not been able to find. In the case of several stelai (all with smoothed sides) it is impossible to determine the original condition of the back. These are: *Gravestones*, figs. 21 and 98 (backs worn), 66 and 100 (backs cut away in modern times), and 101 (fastened against wall of Museum). This is true also for Agora D (worn but probably smoothed) and E (eroded by cesspool) and a fragment in Liopesi with a retrograde inscription, Peek, *Ath. Mitt.*, XLVII, 1942, p. 88, no. 142, pl. 2 (fastened against wall of Museum).

²¹ Dated in the first third of the century by Blümel, *Berlin Catalogue*, II 1, A2. Johansen, *Grave-Reliefs*, p. 90, note 1, upholds Miss Richter's dating.

Add:

Fragment with legs, Athens, N. M. 83, probably to be associated with the Diskophoros (Pl. 7, d).

Boxer from the City Walls, *A.J.A.*, LVIII, 1954, pl. 43, 1, tentatively dated around 560.

Fragment in Liopesi, with signature of Phaidimos,²² Ἀρχ. Ἐφ., 1937, p. 538, fig. 1.

Back drove, sides smooth

New York youth, *Gravestones*, fig. 62 (and Agora fragment A here associated with it) 575-550

Stele of Theron, C here, *Gravestones*, fig. 89 (claw chisel at base in back) 550-525

Add:

Stele of a Teian, Athens, Epigraphical Museum 416 (Pl. 11, b) (see below, pp. 38-40, claw chisel at base)

Fragments of a plain (perhaps once painted) stele in Markopoulo (see above, p. 32)

Back claw chisel, sides smooth

Ikaria warrior, *Gravestones*, fig. 70 (back worn from use as a threshold, claw marks visible at ends) 550-525

New York painted fragment, *Gravestones*, fig. 103 525-500

Back claw chisel, sides drove

Brother-and-sister stele, *Gravestones*, fig. 73 550-525²³

New York head of youth, *Gravestones*, fig. 71 550-525²⁴

New York palmette stele, *Gravestones*, fig. 91 (claw chisel on sides of palmette) 550-525

Aristion, *Gravestones*, fig. 93 525-500

Antigenes, *Gravestones*, fig. 104 525-500

Painted stele in the Kerameikos, *Gravestones*, p. 109 525-500

²² Peek (*Ath. Mitt.*, XLVII, 1942, p. 85) seems not actually to have looked at the stone, for his description bears little relation to the facts. It is finished on the bottom with the point (not broken) and both the back and sides are smoothed, the back with a somewhat coarser abrasive (this corresponds to Blümel's description of the Berlin fragment with the head of a youth incised). Dimensions of the Liopesi piece: Pres. H. 0.51 m.; W. at bottom 0.475 m.; at top 0.46 m.; Th. at bottom 0.165 m.; at top 0.16 m.

²³ Dated "perhaps around 540" in *Catalogue*, p. 12.

²⁴ Dated "about 530" in *Catalogue*, p. 15.

Add:

Fragment of shaft in Agora, Inv. S 1871 (blank, presumably painted)

Back point, sides smooth

Lyseas, *Gravestones*, fig. 94 (very careful pointwork, edges squared with flat chisel) 525-500

Back point, sides drove

Louvre incised and painted stele, *Gravestones*, fig. 105 525-500

Laurion youths, *Gravestones*, fig. 99 525-500

Agathon and Aristokrates, *Gravestones*, fig. 96 525-500

Back point, sides claw chisel

Antiphanes, N. M. 86, *Gravestones*, fig. 88 550-525²⁵

Add:

Fragment of painted stele in Berlin, Blümel, A8, dated around 510

From this list it would appear that standards of finish, as so often happens in matters of mere craftsmanship, present a steady decline. The one striking exception, the stele of Antiphanes, appears for other reasons also to be misdated. It will be noted that our New York stele is the only one in Miss Richter's early group that does not have a smooth-finished back. We need not conclude for this reason that it has to be later than the second quarter, for the style of the sculpture remains the best criterion, but it might well be an additional argument for bringing it down near 550 B.C. So far as the problem of dating is concerned, it is unfortunate that the case for associating the stele with the Chairedemos base is not either a little stronger or weak enough to be thrown out altogether. The Agora fragment demonstrates that the stele comes from Athens, and thus it is highly probable that both stele and base were found in a context of re-use, where their being together loses some of its significance. The base appears from its inscription to be earlier than either of the other two Phaidimos signatures; this would make the New York relief not only earlier than the kore but also earlier than the stele in Liopesi, which has the careful finish and the thick shaft of the Gorgon stele group.

The thinness of its shaft is another noteworthy feature of our stele. The Gorgon stele, the Diskophoros, the Noack fragment and the Liopesi stele have thicker shafts, well suited to the sphinx-crowned cavetto capitals that were popular in the first half of the sixth century.²⁶ Can ours have held such a crown? Even if we assume a

²⁵ On the dating of this, see below p. 44.

²⁶ Miss Richter is certainly right in avoiding the term "pillar stele" for the stelai that carried

minimum height, with the shaft terminating immediately above the picture panel, as in the poros swordsman stele in the Kerameikos, we must restore about half again the preserved height of the New York fragment. Since the stele diminishes from 0.111 m. to 0.095 m. in thickness in the preserved part, the original thickness at the top of the shaft cannot have been more than 0.087 m., and may well have been somewhat less. Furthermore, as the cavetto capitals diminish somewhat from their bases to the throats, one which would fit such a shaft would be perilously slender.²⁷ Perhaps it would be better to accept tentatively the possibility that some simpler form of capital already existed in Attica at the time when this stele was made.

The fragment of a volute capital, B (Pl. 8, a and b), is in the same material as the New York youth to which we have assigned our fragment A. Since fragments A and B have the same provenance, one would be tempted to associate the two, were it not that the restored width and thickness of B are too great. Nevertheless, it may provide the answer to the kind of finial the New York stele had. The closest parallel to B, and from its published drawing and description it seems to have been a very close parallel indeed, unfortunately cannot be found at present (Pl. 8, c). It was published by Conze as being in the National Museum in Athens, but no number was cited for it and no provenance given.²⁸ Like our fragment, it comes from the lower right-hand corner of a capital with incised and painted decoration: a band of Doric leaves along the bottom and a projecting volute above it at the side. It is made of "Hymettian," gray Attic marble. One might almost think that the Agora piece was actually the same fragment, lost and rediscovered like the stele of Theron, did not the dimensions differ drastically. We estimated the thickness of the Agora fragment at *ca.* 0.102 m. (above, p. 26). Conze gives the thickness of the other fragment as 0.085 m. at the bottom and 0.07 m. at the top, and he implies that the whole thickness is preserved, for he describes the back as roughly finished and mentions the pour hole by which the dowel was leaded from the back. The hole for this dowel, with some of the lead still in it, is said to be located between the second and third leaves. No indication of the size or shape of the hole is given. The original base-width of the Conze fragment thus remains a matter of conjecture. The height given for the whole fragment and the level of the break in the volute suggest that the scale of volutes and leaves was approxi-

cavetto-sphinx capitals, for all except the poros stelai are more slabs than pillars in their proportions. Still, structural considerations undoubtedly influenced the thickness of the shaft, and there is a predominance of thick shafts in the early period. The two bases of Tettichos and Kleoites (*Gravestones*, p. 24, note 38) can be eliminated from the discussion, for the big square cuttings in their tops come from modern re-use, as one can see not only from their crudeness but from the fact that they have been provided with drain holes. They may originally have been normal stele-bases.

²⁷ The most slender preserved cavetto capital is that from the Kerameikos discovered together with its sphinx (Kübler, *Arch. Anz.*, 1943, cols. 301-444) which measures 0.096 x 0.324 m. in the throat and seems to have widened considerably to its base.

²⁸ Conze, I, no. 28, pl. XIV, 6; Richter, *Gravestones*, p. 81, fig. 14.

mately that of the Agora capital, but Conze's drawing, which shows only three and a half leaves preserved, is difficult to reconcile with his width of 0.27 m. for the whole fragment. Both the thickness and the material of this lost fragment are appropriate for the New York stele to which A belongs, but unless the actual stone can be found we have no way of knowing whether its width would have exceeded 0.33 m., the maximum top-width for the stele.

The Conze finial has been restored on the basis of the brother-and-sister stele in New York as a double-volute of lyre design supporting a sphinx, and dated accordingly to the third quarter of the century, which would be too late for the New York youth. We may seriously question, however, whether it was thick enough to support a sphinx safely.²⁹ Probably it should be restored with a palmette instead. Does it necessarily follow that this and the Agora fragment are as late as 530? Is the lyre-sphinx form a necessary predecessor of the plain palmette? On the brother-and-sister stele the double volute is painted on a flat surface above a projecting moulding decorated with a Doric leaf pattern. The Conze finial and that from the Agora have the same Doric leaves, though they are incised in one plane with the volutes and only the profile at the side of the capital suggests a throat moulding.³⁰ Miss Richter thinks of the leaf pattern as a survival from the cavetto capitals, and derives the double-volute design from the two-tiered Ionic stele crowns familiar to us from Samos and elsewhere. The Attic designers were presumably influenced by these Ionic stelai, but not to the extent of abandoning their traditional sphinxes. Hence they adopted the volutes but reduced the crowning palmette to the role of a filling ornament. Since Buschor placed the earliest of the Samian capitals just before the middle of the sixth century, the earliest Attic derivatives would have to be a little later.³¹

There is no reason to doubt that the idea of the palmette-stele came from Ionia, and in fact new evidence tends to strengthen this very reasonable hypothesis.³² But perhaps its formal evolution in Attica does not need to be quite so complicated as that outlined above. We hardly need to invoke the contamination of Ionian palmette and Attic cavetto capital to explain the lyre form. A closer parallel can be found nearer home. The volutes above Doric leaves inevitably call to mind a sight that must have been familiar to the Attic artists who designed these stelai: that of a terracotta

²⁹ Miss Richter, *Mélanges Picard*, II, p. 869, note 4, quotes Dinsmoor as saying that this and a fragmentary volute-finial in New York are too thin to have carried sphinxes. Dinsmoor tells me that he still holds this opinion. Miss Richter, *Catalogue*, p. 15, now suggests a palmette for the New York piece.

³⁰ It seems quite clear from the drawing of the Conze fragment that it was flat like the one in the Agora. Miss Richter's expression "throat moulding" (p. 81) is perhaps a bit misleading.

³¹ *Gravestones*, p. 84. Buschor says of the earliest inscribed stelai from Samos that one would not place them later than the middle of the century (*Ath. Mitt.*, LVIII, 1933, p. 25) but he conjectures that the type of the palmette stele was evolved in the seventies (*ibid.*, p. 42).

³² See below, p. 40.

palmette antefix with curling tendrils at its base perched above a Doric leaf geison.³³ The antefixes of the Hekatompedon, in which the terracotta forms are already translated into marble, show a variety of treatments of the base tendrils, one of which approaches the lyre form.³⁴ From this to the lyre-palmette capital would be no great step for these inventive craftsmen.³⁵

I should like to restore the Agora capital, B, also as crowned by a palmette, even though its thickness is greater than that of the Conze fragment. There is one additional point that favors this. On the brother-and-sister stele the rather awkward projection of the abacus from the flat volute-section is balanced and to some extent mitigated by the projection of the Doric leaf moulding below. On the Agora and Conze capitals the Doric leaf is in the same plane with the rest, suggesting that nothing projected above. We may guess that these, not the Ionian double-tiered volute finials, would be the immediate ancestors of the lyre-sphinx capital. The drawing of the incised leaves on the Agora piece has a naïvely earnest look that makes it seem earlier than the elegant painted pattern of the brother-and-sister stele.

The stele of Theron, C (Pl. 9, d), still remains the only absolutely certain example of an attached palmette. As such it has a long history of re-publication and discussion, all based more or less on the data given by Vulliamy, which seems to have been copied by von Stackelberg and Kinnard.³⁶ Since the Agora fragment is all that

³³ Cf. the poros geisa from small building A on the Akropolis, T. Weigand, *Die archaische Poros-Architektur der Akropolis zu Athen*, 1904, pp. 150-157, figs. 135-138. This building must have had terracotta antefixes, though it is not certain which of those preserved (E. Buschor, *Die Tondächer der Akropolis*, 1928-1933) belonged to it.

³⁴ Weigand, *op. cit.*, p. 48, fig. 69. I use the term "Hekatompedon" as a convenient one-word designation for the archaic temple on the site of the Parthenon discussed by Dinsmoor (*A. J. A.*, LI, 1947, pp. 109-151; *Architecture of Ancient Greece*,³ 1950, pp. 71-72) under this title, without implying that this temple is actually the Hekatompedon of the 485 inscription.

³⁵ Indeed, it is not at all impossible that some of the earlier Athenian stelai were actually made by men who had worked on the Hekatompedon. In its smaller way the construction of this building, involving as it did an unprecedented amount of delicate work in local marble (metopes, simas, antefixes and akroteria), may be compared in its effect to that of the Parthenon. The handsome stelai from the Themistoklean Wall are in many ways strikingly like the Hekatompedon marble work. Whether or not the quarries from which the marble for the Hekatompedon came had been worked for sculptural marble before the building was begun, the scale of operations must have been greatly increased in order to meet its demands. It would be perfectly natural to suppose that after the temple was completed a surplus both of stone and of skilled marble-workers led to the use of carved marble gravestones on a greater scale than before. If so, we might take the date of the building as a probable *terminus post quem* for the group headed by the Gorgon stele. Although the Gorgon stele itself is of island marble, the other members of its group are of white Attic marble similar to that used in the Hekatompedon. The decoration of the Gorgon stele reflects Hekatompedon motives, e. g. the running Gorgon and the T-maeander.

³⁶ Vulliamy, *Examples of Ornamental Sculpture in Architecture, drawn from Originals in Greece, Asia Minor and Italy in the Years 1818-1821*, 2nd edition, 1825, pl. 20, 4; von Stackelberg, *Gräber der Hellenen*, pl. 6, 2-5; Kinnard in Stuart and Revett, *Antiquities of Athens*, Supplement,

has survived to test the accuracy of these descriptions and drawings, it is worth looking at in some detail. The stele is a moderately wide and heavy one, with base dimensions appropriate to a regular Attic relief stele. Vulliamy's drawing and dimensions indicate a startlingly tall and slender shaft, with its height equal to seven and one-fifth times its width at the base. With the diminution that we can measure on the preserved fragment, the top of a shaft that tall would be only 0.08 m. thick, which hardly seems enough to hold a cutting for a marble tenon to support an anthemion 0.67 m. high. Also the position of the inscription has been falsified on the Vulliamy version, being shown as half-way up the shaft instead of near the bottom. Probably Vulliamy simply drew the palmette and the inscription on the spot and recorded the dimensions of the shaft to be drawn later. A misreading of the dimensions or a failure to record the distance of the inscription from the bottom of the stone could have produced the erroneous restoration.

In the delightfully circumstantial picture of Fauvel at home among his antiquities that was painted in Athens by L. Dupré (Pl. 9, a),⁸⁷ the stele appears in the background, leaning against the wall of the court. It appears tall, but not of abnormal proportions. Perhaps the over-all dimension including the palmette was twelve feet, as Fauvel implies in his letter.⁸⁸ Notice that Dupré has also indicated the border stripes, which the architects leave out entirely.

The stele of Theron has been dated around 530 B.C. because that was thought to be the date when palmette-stelai were first made in Attica.⁸⁹ The separately attached finial suggested that it was a transitional example. If we accept the idea that separately attached palmette-finials were made as early as around 550, Theron's stele has more latitude, but the letter-forms do not permit us to place it earlier than the middle of the century. A date in the 40's or 30's would satisfy the epigraphists. The incised technique of the palmette reminds us of Agora fragment B and the finish of back and sides is the same as on the New York youth and A. The sides of Theron's stele are carefully smoothed and the back given a regular drove-work finish. Only at the bottom in the strip that would be concealed by the base do marks of the claw chisel appear. This suggests that though the tool was in regular use at this time its marks were not considered attractive.

The same finish appears on a smaller stele of which only the lower part is preserved in the Epigraphical Museum in Athens (Pl. 11, a and b). Its sides have been smoothed, but not quite enough to eliminate all marks of the drove (cf. the New York

p. 13. Vulliamy's description is quoted by Miss Richter, *Gravestones*, p. 93. Von Stackelberg and Kinnard do not describe the stone but repeat Vulliamy's dimensions in their drawings. Kinnard differs from the other two in making the base of the finial the same width as the shaft instead of wider. This seems to agree with Dupré's version (Pl. 9, b; see above, p. 27).

⁸⁷ See above, p. 27.

⁸⁸ See above, p. 27, note 4.

⁸⁹ *Gravestones*, p. 95.

youth); the back is drove-finished. The band of claw chisel work at the base appears on the front as well as the back. The paint stripe around the base here seems to have been black instead of red as on Theron's stele, for only the white line of it remains visible on the sides of the stone. From 0.21 to 0.28 m. above the bottom of the stele a three-line inscription in straggly Ionic characters names the deceased,—*ξένο εἰμὶ τῷ Καλήτορος τῷ Τηίου*.⁴⁰ This monument of an Ionian with its modest dimensions ought surely to be restored with a palmette finial. Its base width, 0.345 m., is less than that of any preserved Attic stele except that of Antiphanes⁴¹ (0.31 m.) but is closest to that of the small painted stele in the Kerameikos (0.353 m.).⁴² That it was made in an Attic workshop we can hardly doubt. The stone is the same fine-grained white marble with darker streaks that is used for so many other archaic gravestones from Athens, and the color of the weathering is that of the fragments found by Noack in the Themistoklean Wall. One is tempted to imagine it actually made in the same shop as Theron's stele, for not only do the details of finishing coincide, but both show the same casual attitude toward squaring the block. In each the left side of the shaft is noticeably thicker than the right. The cursive Ionic letters may have been written on in paint by some member of the family to be carved out by the stonecutter. They have no resemblance to the ruled and measured letters of archaic Attic inscriptions.

Like the palmette, the insistence on having the name on the stele itself seems to be an Ionian feature.⁴³ The normal Samian stelai, however, carry the inscription near the top of the shaft.⁴⁴ Its position low down on the shaft on Theron's stele and that of the Teian suggest that something was painted above it. On the stele of Theron there would be ample room for a picture of the deceased. There might have been a smaller one on the Teian's stele or there might have been a picture of some symbol, like the cock on the stele of Antiphanes. The small stele from the Kerameikos had a painted picture of the deceased, but there the inscription was apparently relegated to the base, as in that of Antigenes in the Metropolitan Museum in New York.⁴⁵

The Teian inscription impresses us as later than Theron's, though the technical similarity of the stones makes one reluctant to separate them too widely. The square-cornered *epsilon* and the fact that the inscription is *stoichedon* suggest that it is not earlier than 525 B.C. The stone deserves further attention both from the epigraphist

⁴⁰ *I.G.*, II², 10444. Kirchner, influenced by the Ionic lettering, dated the inscription to the second half of the fifth century. He suggests *Εὔξενος* or *Σώξενος* as restorations for the name. The former is more likely. The fact that an Attic *Εὔξενος* of the Hellenistic period (*I.G.*, II², 6388) was buried in the same area (see below, p. 40 and note 46) may be just a coincidence, like the fact that horses are now stabled in the so-called "Kimonian Tomb."

⁴¹ *Gravestones*, pp. 86-87, figs. 18, 88.

⁴² *Arch. Anz.* 1938, col. 605, fig. 17 left; *Gravestones*, p. 109.

⁴³ This was pointed out to me by Miss Jeffery.

⁴⁴ E. g. the stele of Diagores, *Gravestones*, fig. 86; Buschor, *Ath. Mitt.*, LVIII, 1933, Beil. XI.

⁴⁵ *Gravestones*, p. 107, figs. 23, 104.

and the prosopographer. With it the matter of Ionian influence becomes a less shadowy thing, even though we may never know precisely who the son of Kaletor was and what place he held in Athenian life. His compatriot Anakreon came to Athens in the time of the Peisistratids. The inscription was found on the property of Nicholas Spyliotes at Palaia Sphageia in Athens, in an excavation which yielded later sepulchral inscriptions and a fragment of an archaic list of names.⁴⁶ This cemetery lay outside the Melite Gate on the ancient road to Phaleron, not far away from the graves of Kimon's family.⁴⁷

The top of a shaft, D (Pl. 10, c), is not easy to date on the basis of what survives. The careful chopping-away of the front of the stone to obtain a level surface suggests that its first re-use may have been in the Themistoklean Wall.⁴⁸ As it now is, its principal contribution is to show that new forms can always turn up. The great height (0.76 m.) of the part above the picture panel is unprecedented and unexplained. How was this tall space used? Actually, there are only two other stelai which have a top panel preserved to its full height, and in neither of these do we know exactly how it was decorated. The panel on the Noack fragment⁴⁹ is 0.48 m. high and the staff or javelin held by the figure in the main panel is continued up across it by two engraved lines. There is no way of telling whether or not there was some engraved or carven representation in the squarish area that has been picked away at the upper right-hand corner. The panel on the brother-and-sister stele has nothing engraved on it, but would be a reasonable size for a subsidiary picture, which would have to have been painted. The stele from Thebes in Boston⁵⁰ shows another use for the area above the main picture. Here we see the beginning of the name of the deceased carved in large letters running vertically upward. Only two letters Θ Ο are preserved and we do not know the original height of the panel. Presumably it would depend on the length of the name. A good long name in large letters like those on the Boston stele would use up the height of our panel.

Both the Thebes stele and our fragment D had separately attached finials, and in both cases the breadth and thickness of the top of the shaft would do either for a cavetto-sphinx capital or for an attached palmette. The Boston relief seems to belong in the second quarter of the century. Probably the Agora piece should be placed in the second or third. The smoothed sides and back rather suggest that it belongs before

⁴⁶ E. M. 417, *I.G.*, II², 2563 (boundary stone of a grave-plot); E. M. 418, *I.G.*, II², 6388, and E. M. 419, *I.G.*, II², 6993 (columnar grave-monuments); and E. M. 420, Peek, *Ath. Mitt.*, LXVII, 1942, p. 13, no. 11 (fragment of an archaic list of names on poros).

⁴⁷ Herodotos, VI, 103; Judeich, *Topographie*², pp. 409-410.

⁴⁸ The modern re-users who made a threshold block of it would hardly have gone to so much trouble.

⁴⁹ Richter, *Gravestones*, pp. 46, 113, fig. 59; *Mélanges Picard*, p. 870, figs. 7-8.

⁵⁰ *Gravestones*, pp. 47-48; figs. 8, 56.

the last quarter. On the other hand, the marble is different from that used in the Themistoklean Wall group⁵¹ and the shaft a little less thick in proportion to its width than in most of those. The outline of the man's profile, so far as one can make it out, is not unlike that of the boy on the brother-and-sister stele.

The taper in width of our fragment is very strong, second only to that of the New York "Chairedemos" (Pl. 7, a).⁵² Some idea of the original height may be got by adding to the preserved height (1.045 m.) that of a stele of about equal width from Ikaria⁵³ (Pres. H. 1.171 m.) which is broken off above where ours is below, between neck and chin of the main figure. Adding the two heights and subtracting five to ten centimeters to compensate for the irregularity of the breaks we would get a restored height of 2.65-2.70 m. for our stele, assuming that there was no additional panel below the feet of the figure. With the observed taper this would give a base width of about 0.495 m., a quite normal width for medium-sized stelai. The proportion of base-width to height is 1: 5.4, slenderer than that of any preserved Attic stele but about what we conjecture for the stele of Theron. The analogy tempts us to restore an attached palmette rather than another form of crown, though we may be in the period of lyre-sphinx capitals.

There are only three certain examples of lyre-sphinx capitals surviving, and these seem to show successive stages in the solution of a rather difficult problem. The volute-palmette was essentially a flat design which provided no transition to the abacus required to carry a sphinx. On the brother-and-sister stele the abacus projects abruptly but is balanced below by a projecting moulding in front and a plain rectangular projection in back. The handsome lyre capital in Boston⁵⁴ presents a more unified effect. Here the whole volute-section is made as thick as the base and abacus, so that there are no offsets from one to the other. The volute-capital is 0.192 m. at the bottom and widens imperceptibly to 0.21 m. at the top.⁵⁵ To avoid an unpleasantly heavy effect, the volute-section has been cut out at the center between the upper and lower volutes.

A fragment of another *à jour* lyre capital from the Kerameikos (Pl. 11, c) is published by Conze and presented by Miss Richter in a restored drawing.⁵⁶ It comes

⁵¹ A medium-grained marble resembling the later Pentelic is also used in a fragment of a base for a grave monument (statue or stele) from the Agora whose letter-forms place it around the middle of the century (Inv. I 5479).

⁵² The New York youth stele diminishes about 0.06 m. per meter of height, our fragment about 0.05 m.

⁵³ *Gravestones*, fig. 70.

⁵⁴ Chase, *A.J.A.*, L, 1946, pp. 1-5; Richter, *Mélanges Picard*, II, p. 869.

⁵⁵ I owe the dimensions of the Boston capital to the kindness of Miss Hazel Palmer.

⁵⁶ *Gravestones*, pp. 80-81, fig. 13; Conze, I, no. 25, pl. 14, 3. Marble. Since the abacus has a finished edge (not a break) on the right, there would be no space for an angle-filler between volute and abacus.

from the top of the capital, preserving parts of the two upper volutes and some of the cutting for the sphinx on top. As in the New York capital the abacus projected forward from the plane of the volutes, but this projection, now broken away, would not have had to be very great, for the volute-section is already 0.185 m. thick. Neither the depth nor the width of the sphinx-cutting are preserved (all the top surface of the abacus is gone) but the finished right edge of the abacus survives 0.20 m. from the axis of the volutes. The end of the rough-picked cutting for the sphinx appears 0.06 m. in from this edge. Thus we have an abacus of about 0.40 m. in width and a sphinx-cutting 0.28 m. or a little less in length (Pl. 11, d). It is a peculiarity of this piece that while the sphinx seems to have been no bigger than usual the upper volutes had a spread of about 0.60 m. (as against 0.393 m. on the Boston capital).⁵⁷ The volutes are heavy and loosely drawn, and the whole piece has a somewhat awkward look as though the artist were feeling his way. This must be the stage between the New York and Boston finials, the product of a sculptor dissatisfied with the first and not yet arrived at the solution represented by the second.

We have no way of knowing how many of these lyre-sphinx capitals were made, but from these three examples it would seem that the stelai that went with them should be distinguishable by their unusual thickness. While it would be dangerous to attempt an exact restoration of the fragment in the National Museum, we may safely assume that the width of the shaft at the top would not have been very much less than the breadth of the upper volutes, and so probably over 0.50 m., and that its thickness would not have been under 0.18 m. The Boston capital took a narrower, but an even thicker shaft.⁵⁸ The man-and-dog stele, E (Pl. 11, f) with its thickness at the base of more than 0.205 m. and its probable width of between 0.50 m. and 0.60 m. seems almost to demand a crown of this type.⁵⁹ The style of the feet suggests a date in the third quarter of the century, when this elaborate form was flourishing.⁶⁰

The flat border of the man-and-dog stele is less usual in archaic Attic stelai than a narrow rim that curves out to the plane of the parts above and below the main panel. The idea of decorating the flat edge with a pattern border recurs only on the chariot-stele in New York, which has a carved guilloche painted in brilliant colors.⁶¹

⁵⁷ Miss Richter's restoration, if its scale is compared with the preserved dimensions of the stone, gives a greatest width of 0.72 m., not 0.52 m. (p. 80, note 4, the dimension taken from Furtwängler who had a different reconstruction).

⁵⁸ Width at base of capital 0.38 m.; thickness 0.192 m.

⁵⁹ The small palmette, Agora Inv. A 1250, connected with the stele by H. A. Thompson (*Hesperia*, Supplement VIII, p. 374) is too thin to have belonged to this stele.

⁶⁰ The best parallels are with kouros of the Anavysos-Ptoon 12 group, especially the kouros Akropolis 596 (cited by Thompson, *op. cit.*, p. 576; Richter, *Kouroi*, no. 115, fig. 345) and those of the Ptoon kouros N. M. 12 (*Kouroi*, no. 121, fig. 344). In relief the closest are those on the New York chariot stele dated by Miss Richter to the decade 535-525 (*Catalogue*, p. 14).

⁶¹ For the colors see *A.J.A.*, XLVIII, 1944, pl. 9. Since the back of the stele is not preserved, it

On this stele the thickness of the sides diminishes evenly all the way up, a separate projecting shelf being provided for the feet of the main figure. On the man-and-dog stele the whole shaft is thickened below the main panel so that the feet rest on a sort of step as in the stele of Agathon and Aristokrates,⁶² and presumably the shaft would have sprung forward again above the head of the figure, as it does on the stele from Thebes in Boston. That both the parallels for this form happen to be Boeotian might suggest outside influence on our stele. One might even go back to Dermys and Kittylos for an extreme example,⁶³ but since the surviving archaic gravestones from Boeotia are so relatively few and so obviously under Attic influence it is dangerous to make much of such a detail. The thickness of our stele and the absence of a sculptured panel beneath the feet make this form practicable.

Scarcely any taper in the width is measurable on the existing fragment, and the condition of the back prevents our knowing how much it tapered in thickness. Hence the chances of definitely attributing a crown to it are slim unless more fragments of the relief itself turn up. We may picture the whole monument as a handsome and sturdy one whose glory was in the firmly drawn and strongly modelled figures of its main panel.⁶⁴ The sober battlement-maeander merely elaborates an ornament already used on the massive poros stele from the Kerameikos belonging to the first half of the century.⁶⁵ The New York chariot-stele with its gaily painted guilloche is in the more exuberant spirit of the Boston sphinx-capital. Our monument is related to these as the peplos kore to the earliest big gaudy korai in Ionic dress. Whether it is in actual fact a few years earlier than the New York and Boston pieces or merely represents a continuance of the old Attic spirit we must leave for the present undecided.

What happens to the Attic korai in the last third of the century may serve as a reminder that radical changes can occur without the intervention of special circumstances. Their change-over to Ionic dress, the great increase in their numbers, and the more frequent occurrence of smaller, cheaper examples all find parallels to some extent in the changes in the types of gravestones. It would seem to be true that the gravestones never became so numerous as korai nor so cheap, but it is quite possible that we

is probable that the original stele was thick, and it may well have carried a lyre-sphinx capital. Possibly another example of the same type is the lower part of a stele in the Barracco Museum with a horseman in relief (*Gravestones*, fig. 100; Conze, I, no. 14). It is said by Conze to have been about 30 centimeters thick before its back was removed. It is also wide (0.55 m.).

⁶² *Gravestones*, fig. 96.

⁶³ Cf. *Gravestones*, p. 10; Johansen, *Grave-Reliefs*, p. 107.

⁶⁴ The theme of the representation has been admirably discussed by Thompson, *Hesperia*, Supplement VIII, pp. 374-377. That this is not the only archaic Attic example of the subject is shown by the fragment of relief from the Agora depicting a man's hand and dog's muzzle published by Thompson in *Hesperia*, XXI, 1952, pp. 108-9, pl. 28 b. Being of large-grained island marble, it cannot have formed part of our stele, which is of fine-grained banded Attic marble, but its date must be similar.

⁶⁵ *Gravestones*, fig. 37.

underestimate the number of small painted palmette-stelai that were made.⁶⁶ There is nothing except the theory of the sumptuary law to indicate that the change to a cheaper form was not a gradual process. The stele of Antiphanes, which is one of the smallest and least carefully finished Attic stelai, has been taken as the typical example of what was permissible under Peisistratos's law. It is suggested that when Peisistratos died the law lost its force and "the modest painted Antiphanes type evolved into the slightly more elaborate sculptured Aristion type."⁶⁷ If the idea of a sumptuary law had not occurred to us, the stele of Antiphanes would appear, from its careless finish, to be one of the latest. This impression is borne out by the letter-forms, which appear to belong well along in the last quarter and look later than those of the stele of Aristion.⁶⁸ It has been thought that the palmette stelai with double volutes should be earlier than those with single volutes, since they are closer to the lyre-sphinx form. The stele of Theron may serve to remind us, however, that the development was not necessarily all along a single line. Its highly original crown is closer to the single-volute than to the lyre form. I should prefer to think that the modest painted stelai ran parallel to the more pretentious sculptured examples in the last quarter of the sixth century, and that both forms of palmette crowns were used.⁶⁹

Whether the much-discussed law should be attributed to Kleisthenes or whether the decline of the archaic stele was due to more natural causes seems still beyond the scope of our evidence to decide. Certainly if one compares the urban Athenian monuments attributed to the last quarter of the century with those that preceded there seems to be a gradual waning of splendor in the stelai. On the other hand there are kouroi and bases for kouroi that can hardly have been cheap memorials.⁷⁰ One wonders how the sumptuary law would have affected these. We must try to reconstruct a general picture of the Attic cemeteries and grave-plots, the kinds of monuments and the complexes of which they formed part, before we can really decide to what period Cicero's words apply best. This is not merely a matter of collecting the sculptural and

⁶⁶ The broken shaft of such a stele, if neither palmette nor color-traces survive, presents nothing to attract the attention. A specimen found in a marble pile in the Agora excavations (above, p. 34) is a good example. It is recognizable only by its dimensions, its taper and the fact that the sides are carefully finished with the drove, the back with the claw chisel. Such a stone makes an admirable step and under this treatment any traces of the painting that might survive would quickly vanish. The stele of Theron, C, probably served as a step at some time after the destruction of Fauvel's house and so lost the letters on the right side.

⁶⁷ *Gravestones*, pp. 91-92.

⁶⁸ Miss Jeffery compares the lettering on Antiphanes's stele with that of a group of modest late sixth-century bases, of which one from the Agora (Inv. I 2352) published by Meritt, *Hesperia*, XVII, 1948, p. 45, no. 36, may serve as an example.

⁶⁹ The Kerameikos painted stele (above p. 33) had a double-volute palmette-crown, not the single-volute type as Miss Richter implies in *Catalogue*, p. 17.

⁷⁰ Cf. the base for a kouros signed by Aristokles recovered from the City Walls near the Piraeus Gate (*A.J.A.*, LVIII, 1954, p. 231, pl. 43, 2) and the fragments of a late sixth-century kouros found with it (*B.C.H.*, LXXVIII, 1954, p. 108, fig. 11). This was the monument of a foreigner, a Carian.

architectural evidence but of studying the inscriptions together with their monuments and learning who the people were who set them up and what their motives were.⁷¹ It is possible that Peisistratos was indeed responsible for the decline of expensive tomb monuments, not directly by prohibiting them but indirectly by robbing them of their aristocratic significance. If wealthy foreigners could set their monuments beside those of the Eupatrids,⁷² the time had come for the latter to show their greatness in some other way. So the Agora may have come to outweigh the Kerameikos in symbolic value and the painted marble sphinxes on their perilous tall shafts yielded place in men's minds to the bronze statues of the Tyrannicides.

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⁷¹ A study of the bases for archaic Attic sepulchral monuments by Miss Lilian H. Jeffery to appear in *B.S.A.* should provide us with a much clearer and more complete picture than we have had hitherto.

⁷² The monument of the Carian, above, note 70 on p. 40 is the most striking example, but we may recall also the Teian's stele, above, pp. 38-40.

ACTIVITIES IN THE ATHENIAN AGORA: 1955

(PLATES 12-27)

IN 1955 the American School of Classical Studies at Athens continued its activities in the Athenian Agora for the twentieth year.¹ Supplementary excavations on a small scale but with interesting topographical results were carried out in the line of an ancient roadway at the southeast corner of the square, and a number of ancient

¹ The veteran staff continued as in the previous year. Eugene Vanderpool served as Deputy Field Director but spent the spring term of 1955 at the Institute for Advanced Study in Princeton working in collaboration with A. E. Raubitschek on a book on the ostraka from the Agora. John Travlos, as Architect of the School's Excavations, divided his time among the excavations, the Stoa of Attalos and the Church of the Holy Apostles. Benjamin D. Meritt, while serving as the Annual Professor at the American School of Classical Studies in the year 1954-1955, made a general review of the inscriptions from the Agora preparatory to their publication in corpus form. Lucy Talcott maintained her responsibility for the records, assisted in the preparation of various studies, supervised the transfer of the first groups of material to the new storerooms in the Stoa and continued her studies in collaboration with Barbara Philippaki on red-figure and black-glazed pottery. Alison Frantz, in addition to her duties as staff photographer, assisted in supervising the restoration of the Church of the Holy Apostles and assembled material for the publication of that building. Virginia Grace, assisted by Maria Savatianou, has kept up her study of ancient wine jars, concentrating this year on those of Knidian origin; in the course of the year she surveyed large groups of stamped jar handles in Alexandria and in the British Museum, and examined the jars recently brought up from the sea near Marseilles. Margaret Crosby supervised the excavation at the southeast corner of the Agora and continued her study of the inscriptions relating to the mines of Laurion. Dorothy B. Thompson spent the summer of 1955 in Athens in the study of terracotta figurines of the Hellenistic period. Evelyn B. Harrison devoted the academic year 1954-1955 to the systematic study of the sculpture from the excavations; she has completed that of the archaic period and much of the 5th-4th centuries B.C. The study of the lamps of the Roman period has again occupied Judith Perlzweig throughout the year. Shorter periods of study were devoted by Mabel Lang to graffiti and dipinti relating to date, weight, capacity, price, etc., by Eva Brann to the pottery of the 7th century B.C., by Henry S. Robinson to the pottery of the Roman period and by Richard H. Howland to the completion of his book on the lamps of the Greek period. Margaret E. Larson assisted Professor Meritt with the inscriptions in the spring and summer of 1955 and will continue in this capacity while holding a fellowship from the School in the year 1955-1956. T. Leslie Shear, Jr. served as photographic assistant during the summer of 1955. Judith Perlzweig and C. W. J. Eliot again bore the brunt of conducting visitors through the excavations and museum.

Ward M. Canaday, President of the Board of Trustees of the School, and Charles H. Morgan, Chairman of the Managing Committee, visited the Agora in the summer of 1955, thus maintaining personal contact with the enterprise and stimulating its progress.

Grateful acknowledgment is made once more to our Greek hosts and colleagues for many courtesies both official and personal: to the Department of Antiquities directed by Professor S. Marinatos and to the Department of Restoration directed by Professor A. Orlandos, to the Ephor of Athens and the Acropolis, Mr. John Meliades, to the Ephor of Attica, Mr. John Papadimitriou, and to Mr. and Mrs. Chr. Karouzos, Director and Assistant Director of the National Museum.

wells were explored in the area of the Stoa of Attalos. Kolonos Agoraios and the west half of the Agora proper were landscaped. The restoration of the Byzantine Church of the Holy Apostles was largely completed, and the reconstruction of the Stoa of Attalos was carried beyond the halfway mark.

ARCHAEOLOGICAL EXPLORATION

The South Road (Pl. 12).²

Inasmuch as the new knowledge accumulated during the past several seasons on the early development of the south side of the Agora had emphasized the importance of the thoroughfare which bordered that side of the square, it was decided to make some soundings in the roadway with a view to learning more about its history. In previous seasons enough of the road had been exposed to the southwest and southeast of the Agora proper to indicate that it had been an important highway linking the western approaches with the central and eastern parts of the city; it was clear too that the road followed a natural course along the lower north slopes of the Areopagus and Acropolis. The high antiquity of the thoroughfare was sufficiently shown by the fact that most if not all of the buildings of the 6th and 5th centuries on the south side of the square had been placed in relation to it.

For the purposes of further exploration an 80-meter section of the road was chosen outside the southeast corner of the square, adjacent, that is, to the eastern part of South Stoa I, the Southeast Fountain House and the Argyrokopeon or Mint. The excavation was directed by Margaret Crosby who had already gained much experience in this general area. Throughout the length of 80 meters the road level of the 5th century B.C. was exposed and at two widely separated points trenches two meters in width were carried down to bedrock to permit an examination of earlier levels (Pl. 12).³

It soon became clear that in this region the ancient road lay directly beneath the modern Asteroskopeiou Street. In some places the modern road surface proved to be at precisely the same level as the ancient; elsewhere, the two were separated by an accumulation of the Byzantine and Turkish period with a maximum thickness of *ca.* 1.25 m. The absence of road metal of the Hellenistic and Roman periods is presumably to be accounted for on the supposition that the ancient roadway was maintained at a uniform level throughout those eras.

The exact level and width of the roadway in this part of its course had been fixed in the latter part of the 5th century B.C., the time of the erection of the Mint, South Stoa I and the Southwest Fountain House. These three structures, together

² For a recent plan of the Agora including this area, cf. *Hesperia*, XXIV, 1955, p. 51, fig. 1.

³ One of these trenches was in line with the fourth room from the east in South Stoa I; the other was opened to the south of the west part of the Mint (Pl. 12, b).

with the Southeast Fountain House and the Heliäia of the archaic period, henceforth constituted a continuous row of public buildings bordering the road on the north. Likewise from the latter part of the 5th century date the earliest of a corresponding series of private buildings along the south side of the road. These southern buildings are extremely ruinous, the remains consisting of little more than wall socles built for the most part of Acropolis limestone (Pl. 12, a, A). The plans are irregular; the rooms are of various shapes and sizes but most are small; several of the buildings were equipped with wells. The inference is that the buildings were houses or shops or, more probably, a combination of the two.

The width of the roadway as delimited by the two rows of buildings measured on the average about five meters. Along its south edge ran a gutter carefully built of large blocks of soft, cream-colored poros; it was intended, no doubt, to carry off surface water. The actual road surface was roughly paved with gravel. No positive traces of vehicular traffic were observed at the level of the late 5th century B.C. or later, but wheel ruts were preserved in the road surface of the late archaic period.

A few centimeters below the road surface as established in the late 5th century B.C. appeared the cover slabs of a stone aqueduct which had been built at that time to carry water to the Southwest Fountain House. This conduit had taken the place of an earlier pipeline of terracotta which in its day had supplied the Southeast Fountain House. These two conduits will be described in greater detail below.

The eastern of the two exploratory trenches brought to light at a level below that of the stone and the terracotta water pipes the ruins of a house (Pl. 12, b, C) which had apparently been demolished in the second half of the 6th century B.C. in the course of the systematization and enlargement of the market place of which the construction of the Southeast Fountain House formed a part. The ruinous foundations of another similar building, presumably also a house, actually underlie and extend northward of that fountain house. Pottery from below their floors indicates that these houses were erected in the late 7th century or early 6th century B.C. so that their period of use was comparatively short. The socles of their walls consist of rubble stone masonry levelled off at the top to receive crude brick; the floors are of rolled clay.

The southern of the two houses just described was separated by a light retaining wall from the east to west roadway of its period. In the period of the house the road followed a line several meters to the south of its later course.

The ruins of the houses are the earliest structural remains encountered in the area. Two burials of an earlier period were found, however, beneath the south edge of the road of classical times at a point to the south of the east end of South Stoa I. Both were cremation burials. In the earlier of the two, dating from the very end of the Protogeometric period, the ashes had been deposited, together with a small iron saw and knife, in an amphora. Outside the amphora lay an iron sword; here too were the fragments of an oinochoe, a kanthros and a pyxis which had been placed

on the pyre. In the other burial the ashes were contained in a shoulder-handled amphora with a meander on its neck, of Geometric date.

Both of the deep exploratory trenches revealed above bedrock (Pl. 12, b, A) stratified deposits of the Late (Pl. 12, b, B) and Middle Helladic periods with a thickness of as much as one and one-half meters. Although there were no associated structural remains, the volume of pottery was enough to attest habitation. This discovery is of interest inasmuch as it provides the most ample and indeed almost the only evidence yet available for habitation, as distinct from burial, within the area later occupied by the Agora or its immediate environs. Even within the thickness of the prehistoric deposit appeared traffic-beaten, gravelled surfaces which implied the existence of a thoroughfare.

The history of the road may be summarized as follows. The natural line from east to west along the lower slopes of the Acropolis and the Areopagus was apparently followed by a track already in the Bronze Age. At this time it must have served a hamlet. In the early Iron Age, when habitation had temporarily ceased, this path provided access to the graves and small burial plots that have been found dotted over the hill-slopes. In the 6th century B.C., as the Agora came into being, the road had achieved sufficient importance to be chosen as the southern limit of the market square. The public buildings erected along the south side of the square in the 6th and 5th centuries were regularly set with their backs to the road. In the late 5th century the thoroughfare assumed the course, level and width which it was to retain, with but slight changes, from that time to the present.

Archaic Pipeline under the South Road (Pls. 12, b, D and 13, a).

The round terracotta pipeline which was exposed in 1955 had been already detected in an earlier season at a point farther to the east. The conduit enters the area of the Agora excavations coming from the east, follows the line of the South Road for about 100 meters and, in its present state, breaks off at a point south of the Southeast Fountain House. The last preserved joint is slightly open on one side in such a way as to indicate that the pipeline was directed to the middle of the back wall of the fountain house; although the actual point of contact has been hopelessly disturbed, there is no reason to doubt that this pipeline constituted the original supply of the fountain house.

The individual sections of the pipe measure *ca.* 0.60 m. in effective length (i. e. presumably two feet) and *ca.* 0.30 m. in maximum outside diameter at the collar; the minimum interior diameter is *ca.* 0.21 m. The sections are connected by an admirable system of flange and groove joints reinforced by heavy collars. Each section was provided with a lidded hole in its top just large enough to admit a workman's arm and set close enough to the joint to enable one in laying the pipe to reach in and seal the joint (Pl. 13, a). The products of two different factories may be distinguished. The

pipes of the first were made with very great care and precision; the clay is buff in color; painted ligatures occur at either end of the pipes and other ligatures were sometimes incised in the flanges while the clay was still soft; the hand holes are oval in outline (Pl. 13, a). The other maker was somewhat more careless in shaping the flanges; his hand holes are square, his clay gray in color; the name Charon, sometimes abbreviated to Cha, was incised while the clay was still soft near one end of the pipe (Pl. 15, c).

These pipes were laid at the bottom of a narrow trench cut in the earth or the soft rock. They were covered simply with earth. A hard water deposit 0.01 to 0.015 m. thick covers the bottom of the pipes and rises to about one-third of the height of the wall indicating that the pipes normally ran far from full.

Since the pipeline at the point where it now breaks off is about 2.00 m. above the floor of the eastern paved area in the Southeast Fountain House and about 2.40 m. above that of the western paved area, the water may be assumed to have flowed out through spouts set in the walls above the paved areas.

Further exploration to the north of the Southeast Fountain House revealed that great pains had been taken for the disposal of the overflow from the fountain. Two periods may be distinguished, in both of which the water was carried from the paved areas at the ends of the building by two terracotta pipes which came together in a Y-shaped junction and thence continued northward. In the first period the pipes were very similar in design to those of the first category of the feed pipes, though smaller in bore (0.115 m.: 0.21 m.). The sections were carefully laid and the lids of the hand holes were put in place. This earlier pipeline now proves to be continuous with one which had been discovered in 1933 flowing from southwest to northeast beneath the Library of Pantainos.⁴ It is clear that in the early days of the fountain house the overflow was carefully husbanded and led off in a northeasterly direction to serve some further need.

At some later date, though probably before the end of the 5th century, the small overflow pipes were replaced by larger pipes which have every appearance of being re-used sections of the original feed line; they had perhaps become available when the terracotta feed line was replaced by the stone aqueduct. Many of the overflow pipes of the second period would seem to have been already cracked or broken when re-used, the lids are missing from the hand holes and the assembling was done carelessly. It would appear, therefore, that in the second period the overflow was treated simply as drainage; its destination is not known for the pipeline is broken away completely a few meters to the north of the fountain house.

The evidence of the pottery found in association with the original feed line of the fountain house points to a date early in the last quarter of the 6th century. Such a

⁴ *Hesperia*, IV, 1935, pp. 334-336.

date is congruent with the letter forms in the name Charon inscribed on some of the pipes (Pl. 15, c). It agrees also with the evidence previously adduced for the date of the Southeast Fountain House itself⁵ and of the original overflow pipe beneath the Library of Pantainos.⁶

Certain significant resemblances between the installation just described and Dörpfeld's "Enneakrounos" at the northeast foot of the Pnyx hill would indicate that the two hydraulic establishments were closely contemporary.⁷ The individual sections of pipe are strikingly similar in design and dimensions.⁸ In both fountain houses, moreover, were used the very hard limestones that are found in the earliest monumental buildings of Athens; and the clamps in the two buildings (one attested for each) are of the same characteristic Z shape.⁹

It is altogether likely, moreover, that the Southeast Fountain House and Dörpfeld's "Enneakrounos" shared a common source. The scale of the Southeast Fountain House is beyond the capacity of any source known within the ancient city limits. If, however, the line of its feed pipe be projected eastward some 800 meters, with due regard for the contours, to a point near the Russian Church, it will be seen to connect with an ancient conduit the line of which was established last century beneath the Royal (now Public) Gardens.¹⁰ This line continues northeastward on a course approximately parallel to the River Ilissos; its ultimate source is believed to be the springs at the feet of mounts Hymettos and Pentelikon. Dörpfeld's "Enneakrounos" was fed by a pipeline the course of which has been followed along the south side of the Acropolis as far as the Theatre of Dionysos; its connection with the line beneath the Royal Gardens, although not positively established, has been regarded by all investigators as little short of certain.

It would seem probable, therefore, that in the second half of the 6th century, as the need for water increased with the growth in population and the rise in the standard of living, an extensive and well considered program was put into effect to meet the need. A substantial and reliable source to the northeast of the city was tapped

⁵ *Hesperia*, XXII, 1953, p. 32.

⁶ *Hesperia*, IV, 1935, p. 336.

⁷ For Dörpfeld's "Enneakrounos," cf. Fr. Gräber, *Ath. Mitt.*, XXX, 1905, pp. 1-64; W. Judeich, *Topographie von Athen*², 1931, pp. 194-203.

⁸ For the pipes from Dörpfeld's "Enneakrounos," cf. *Ath. Mitt.*, XXX, 1905, pp. 24 f., figs. 7, 8; the original overflow pipes from the Southeast Fountain House are illustrated in *Hesperia*, IV, 1935, pp. 335 f., figs. 22, 23.

⁹ *Ath. Mitt.*, XXX, 1905, pp. 50-54; *Hesperia*, XXII, 1953, pp. 29-31.

¹⁰ E. Ziller, *Ath. Mitt.*, II, 1877, pp. 112 f., pl. VII; Fr. Gräber, *Ath. Mitt.*, XXX, 1905, pp. 56-62; W. Judeich, *Topographie von Athen*², p. 202, plan I. It may be noted that such a conduit passing from east to west along the north foot of the Acropolis could also have supplied the water clock in the Tower of the Winds, the public latrine at the east end of the Market of Caesar and Augustus, the fountain house in the south side of that same market place and the two gymnasia, viz. the Diogeneion and the Ptolemaion, which are believed to have been situated in this general area.

and carried in underground conduits to a point to the northeast of the Acropolis. Here the main line forked, one branch passing to the north and the other to the south of the Acropolis, in both cases at a level sufficiently high to permit the watering of those populous districts of the city. Each of these branches ended in a public fountain house of which we now know something. How many other installations may have been supplied by those same pipelines we do not know.

There is good reason to believe that this water system, including the two terminal fountain houses, dates from the time of the Peisistratids. It was undoubtedly the inspiration for the remarkable outburst of representations of fountain houses on Attic vases of the late black-figure period. It is not so certain that we have yet set eyes on what was, according to literary testimony, the most famous hydraulic work of the tyrants, viz. the Enneakrounos. The fountain house explored by Dörpfeld at the foot of Pnyx hill, though qualifying in respect of date and perhaps also of scale, cannot be reconciled with Pausanias' straightforward reference to the building at the close of his account of the Agora (I, 14, 1). The Southeast Fountain House, though its date and scale are appropriate and its situation would suit Pausanias' mention, has not yet revealed any trace of an earlier Kallirrhoe which, according to the literary tradition, preceded the Peisistratid Enneakrounos. It would therefore seem discreet to regard this venerable problem as still unsettled.

Stone Aqueduct under the South Road (Pl. 13, b).

The stone aqueduct which eventually replaced the terracotta pipeline also enters the area of the Agora excavations from the east; thence it runs directly under the South Road the full width of the Agora to supply the Southwest Fountain House. Identity in course and level indicates that the successive conduits drew from the same source. An extension of the old pipeline was obviously required when the new fountain house was erected at the southwest corner of the square and some augmentation in the actual volume of water may also have been necessary. It was perhaps these considerations that led to the change from the simple terracotta pipes to the more capacious though much more costly stone construction.

The supply of the Southwest Fountain House was not the sole function of the new stone aqueduct. It took over from the archaic pipeline the supplying of the Southeast Fountain House.¹¹ Although again the actual point of junction is not preserved, the bottom of the new conduit was kept at exactly the same level as the old as it passed the building so that the system of distribution within the building could have been left unchanged. It is altogether likely, moreover, that the fountain in the back of South Stoa II drew its water from the stone aqueduct; this point may be checked in

¹¹ The connection between the stone aqueduct and the Southeast Fountain House was suggested already in 1953, although the role played by the terracotta pipeline was not at that time realized (*Hesperia*, XXII, 1953, p. 32).

the future when the South Road is explored at the appropriate point. There are also indications that lesser pipelines of terracotta or of lead branched off from the aqueduct to supply other near-by establishments.

The aqueduct is substantially built of soft cream-colored poros perhaps from the quarries of Aegina. According to the contours of the underlying rock formation the aqueduct rests on and in earth or in a trench cut in bedrock (Pl. 12, a, B). The normal dimensions of the channel or specus are *ca.* 0.45 m. in width and *ca.* 1.20 m. in height, probably to be regarded as 1½ and 4 ancient feet respectively. Top and bottom are each formed of massive blocks laid transversely; the wall blocks are set as orthostates the full height of the interior (Pl. 13, b). A channel with curved bottom was cut in the floor leaving a narrow ledge to either side just wide enough for the feet of a workman engaged in cleaning or repairs. It seems probable that in the beginning the water was confined to this trough in the floor. In later times, however, terracotta pipes (as many as three are preserved at one point) were attached to the walls, presumably to maintain some of the water at a higher level so as to facilitate distribution.

The ceramic evidence thus far available would indicate for the aqueduct a date in the last quarter of the 5th century B.C. It continued in use at least until the Herulian destruction of A.D. 267 but appears to have been abandoned soon thereafter.

The construction of the stone aqueduct necessitated a more formal treatment of the surface drainage which came down from the gully between the Areopagus and the Acropolis. A deep channel was now dug for the drain and over it the aqueduct was carried on a bridge; this would seem to mark the beginning, at least in this area, of what has come to be known as the East Branch of the Great Drain of the Agora.

Another by-product of the exploration of the stone aqueduct and the South Road was the discovery that the Mint was approximately twice as wide as originally supposed in its east to west dimension, just as it was found in 1954 to be twice as large north to south. Since, however, the eastern part of the building is still overlaid by a modern street, further discussion will be deferred until later.

Ancient Wells bordering the South Road.

Three wells were encountered in the houses or shops along the south side of the South Road; in each case the well opened in the front part of the building close alongside the street. One of the three had been in use for a comparatively short time in the Hellenistic period; the second yielded a very little material of late Roman date; the third produced a great number of objects in stratified sequence covering the whole of the Roman period.

This third well, which reached a depth of 22.00 m. and was curbed with terracotta tiles, served presumably a private house lying just outside the southeast corner of the market square.¹² The shaft contained a copious supply of pottery resulting from

¹² This well appears in the Agora records as Deposit Q 17:4. The following account of its

normal use of the well over a period of at least six centuries of our era. The lowest filling is that of the first half of the 1st century after Christ and is characterized by typical wide-mouthed water jars with "basket handles" (Pl. 14, a).¹³ A miniature amphora found at this level (Pl. 14, g)¹⁴ is an interesting adaptation of a contemporary form of wine jar (normally 1.50 m. in height); it is difficult to understand the purpose of our small amphora unless it served as a child's toy.

The use of the well continued without serious interruption to A.D. 267 and the invasion of the Herulians. The employment of basket-handled jars, especially designed as well jars, continued almost to that date; this well, however, as others in the Agora area, shows clearly that by the middle of the 3rd century the terracotta well jar had been replaced by the lead, bronze or wooden bucket, and, more often, by emptied wine jars adapted to re-use in the drawing of water (a large hole punctured in the shoulder served as a filling hole, while the narrow mouth characteristic of all wine jars served as the air outlet).

By the end of the 3rd century the well (and presumably, therefore, the house with which it was associated) was again in use and continued as a water supply without further interruption until the late 6th century. The quantity of pottery which accumulated in the well during this period was over twice as much as that of the previous two hundred and fifty years. In addition to many pitchers (as Pl. 14, c)¹⁵ and wine jars adapted for drawing water, there appears a great quantity of small jugs (as that in Pl. 14, b)¹⁶ which must represent the drinking cups kept around the well-head and occasionally knocked off into the well by an extravagant gesture in the course of some household or political argument.

During the course of this later period of use several vessels, unusual for their shape or decoration, found their way into the well. A jug of the late 4th century (Pl. 14, d)¹⁷ is handsomely decorated with gouged ornament, while another of the late 5th century (Pl. 14, e) is ornamented with a crisscross pattern in light red paint over buff clay. This vessel is unique in that the wheelmade body is square in plan;¹⁸ it is presumably an imitation of the more common rectangular jugs made by the glass-blowers of Roman times.¹⁹ Three specimens of a handleless pot of ovoid shape with

contents has been contributed by Henry S. Robinson and the observations on the graffiti by Mabel Lang.

¹³ Inv. P 25261. H. 0.235 m.; Diam. 0.20 m.

¹⁴ Inv. P 25252. H. 0.153 m.; Diam. 0.067 m.

¹⁵ Inv. P 25174. H. 0.283 m.; Diam. 0.179 m. Middle of the 4th century.

¹⁶ Inv. P 25133. H. 0.174 m.; Diam. 0.128 m. Late 4th or early 5th century. For the graffiti on this pot, see below, p. 24.

¹⁷ Inv. P 25155. H. 0.243 m.; Diam. 0.162 m.

¹⁸ Inv. P 25077. Pres. H. 0.182 m.; W. 0.117 m. The vessel was apparently thrown as a normal round-bodied pot and after turning was "squared-up" by pressure applied against the walls.

¹⁹ Cf. glass jugs of the 1st and 2nd centuries from Corinth: G. Davidson, *Corinth*, XII, *The Minor Objects*, Princeton, 1952, nos. 656 ff., especially nos. 657, 659, 660.

short neck protruding from the middle of the body (as Pl. 14, h)²⁰ belong to the early 5th century and perhaps represent water bottles of workmen or travellers, carried suspended in a sling of rope or leather. The appearance of these three bottles offers striking proof of the dangers inherent in the use of the *argumentum ex silentio* in archaeological studies; for in the course of nineteen seasons of digging in the Athenian Agora and the clearance of dozens of wells containing pottery of the 5th century, after which one might have assumed that we possessed a complete repertory of late Roman ceramic types, no single specimen of this "football pot" had been previously discovered. A small, undecorated vessel of the middle of the 5th century is a good example of the decanter which appears commonly in the fillings of this period (Pl. 14, i).²¹ To the late 6th century belongs a jug of very characteristic, soft, micaceous clay and satiny finish which has a dull red glaze applied to the upper part of the body (Pl. 14, f).²²

Striking among the minor finds from this well are the lamps, of which four are illustrated in Plate 15, a²³ and a few fine pieces of bone (Pl. 15, b).²⁴ The graffiti and dipinti found on the pots of the well are of special interest and are dealt with below (p. 56).

The pottery of this well promises to be of considerable importance in the study of the typology of Roman ceramics. For, although no coins or other objects datable by internal evidence were found, the abundance of pottery and the "stratification" of the filling, from top to bottom, will make possible a very complete presentation of the variations, century by century, in the shapes of numerous vessels, coarse and fine, which were in general use in the city of Athens between the 1st and the 6th centuries of our era.

Above the 6th century pottery of the well there appeared a small quantity of sherds and a few nearly complete pots which probably represent brief periods of re-use in the 8th and again in the 10th (?) century (with the appearance of the earliest Byzantine green and brown glazed fabrics).

Seventeen of the pots from this well were inscribed with graffiti or dipinti. Despite their comparative fewness, the inscriptions served a wide variety of purposes, including capacity, contents, tare, date and ownership.

Among the most interesting are the following:

²⁰ Inv. P 25122. L. 0.196 m.; Max. diam. 0.153 m. The other two examples (Inv. P 25137 and an uninventoried bottle) are of identical fabric and similar dimensions.

²¹ Inv. P 25087. H. 0.182 m.; Diam. 0.107 m.

²² Inv. P 25028. H. 0.177 m.; Diam. 0.152 m.

²³ Inv. L 5239, first half of the 1st century; L 5238, early 2nd century; L 5231, late 3rd century; L 5227, early 5th century.

²⁴ Inv. BI 750, a knife handle carved in the form of the forepart of a lion, late 2nd century (Pres. L. 0.07 m.); BI 748, a pin of the late 3rd or early 4th century (Pres. L. 0.10 m.); BI 749, a broad-bowled spoon of the middle of the 3rd century (Pres. L. 0.129 m.).

A dipinto on the shoulder of an amphora of the early 4th century (Inv. P 25175) reads $\pi(\lambda\eta\rho\omega\mu\alpha) \xi\alpha\nu\theta\omicron\upsilon \mu\acute{\epsilon}\lambda\iota\tau\omicron\varsigma \xi(\acute{\epsilon}\sigma\tau\alpha\iota)\iota\gamma$ i. e. capacity: 13 sextarii of yellow honey. The capacity of the vessel is exactly ($13 \times 0.546 =$) 7.098 liters.

On another amphora (Inv. P 25170) of the early 4th century is a dipinto which gives the weight of the empty vessel (tare): $\delta\sigma\tau\rho\acute{\alpha}\kappa(\omicron\upsilon) \eta< \lambda\iota \epsilon$ i. e. (weight) of the jar: $8\frac{1}{2}$ Roman lbs., 5 (oz.). The amphora is very nearly intact, missing only a small part of the tip, and weighs $8\frac{3}{4}$ Roman lbs. ($8\frac{3}{4} \times 327$ gms.).

Two one-handled jars of the 5th and 6th centuries have dipinti which give indiction dates. Each also gives the name of an estate, so that the jars may be assumed to have contained part payment in kind of the tax assessed on the estate named for the year of the tax period indicated.

Inv. P 25048	$\overset{\omega}{\chi} \pi\rho\omicron\kappa$ $\epsilon\pi\iota\nu \epsilon\acute{\iota}$	i. e. $\chi\omega(\rho\acute{\iota}\omicron\upsilon) \Pi\rho\acute{\omicron}\kappa(\lambda\omicron\upsilon)^{25}$ $\acute{\epsilon}\pi\iota\nu\epsilon(\mu\acute{\eta}\sigma\epsilon\omega\varsigma) \iota\epsilon$
Inv. P 25064	$\overset{\omega}{\chi} \pi\eta\gamma\eta\varsigma$ $\nu \gamma$	i. e. $\chi\omega(\rho\acute{\iota}\omicron\upsilon) \Pi\eta\gamma\eta\varsigma$ $(\acute{\epsilon}\pi\iota)\nu\epsilon(\mu\acute{\eta}\sigma\epsilon\omega\varsigma) \gamma$

Several jars are inscribed with personal names, which may belong either to the owner or to the producer of the contents. Two of the most complete will serve as illustrations:

Inv. P 25224, dipinto on the neck of a 3rd century amphora: $\text{'}\text{Αντιμαχ[}$

Inv. P 25246, dipinto on the shoulder of a 1st century amphora: $\Theta\epsilon]\mu\iota\sigma\tau\acute{\omicron}\kappa\lambda\epsilon$

Other jars preserve parts or abbreviations of what are almost certainly names, but some abbreviations may also be interpreted in other ways, like one on a mid 3rd century amphora (Inv. P 25195) that seems to refer to the quality of the contents: $\pi\rho\omega$ i. e. $\pi\rho\acute{\omega}\tau\omicron\varsigma$.

On a small wheel-ridged jug (Inv. P 25133; Pl. 14, b) of the late 4th or early 5th century appears a Christian graffiti: $\text{✠} \mid \tau\eta\varsigma \pi\alpha\rho\theta\acute{\epsilon}\nu\omicron\upsilon$. This might be read as "Christ, son of the Virgin," and thought of as a blessing on the vessel and its contents. But perhaps the genitive is possessive, with the *chi-rho* serving simply as a symbol, and designates the pot as part of the equipment in a shrine of the Virgin.

On a gouged jug (Inv. P 25054) of the late 5th or early 6th century is scratched a number, the significance of which is as yet unclear. The chief interest lies in the appearance of the sampi: $\xi\delta$ (964).

On a shoulder fragment of a jug (Inv. P 25024) appears the dipinto $\pi\lambda$. The meaning of the abbreviation is uncertain, but the letter shapes, which cannot be

²⁵ Proklos is supplied *exempli gratia*. As we know from *I.G.* II² 2776 and from other similar pots found in the Athenian Agora, estates or fields were called sometimes by geographical or topographical names, and sometimes by the names of past or present owners.

paralleled before the 8th century, date the fragment to the most scantily represented of all periods in the Agora.

Wells of the Archaic Period under the Stoa of Attalos ²⁶

A by-product of the reconstruction of the Stoa of Attalos was the discovery of three more wells of the archaic period. Like the well beneath the Stoa Gutter, found in 1954,²⁷ and like many other wells and tombs found in previous seasons, these wells would almost certainly never have been discovered in the course of an ordinary archaeological investigation, for they lay wholly or partially under the walls of the Stoa itself or one of its adjuncts. They were brought to light by the engineers in the course of a careful examination of the Stoa foundations prior to reconstruction.

WELL BENEATH FOUNTAIN HOUSE OF STOA TERRACE

The earliest of the three wells of 1955 lay just off the southwest corner of the Stoa and beneath the underpinning for the Fountain House at the south end of the Stoa terrace. The well was of exceptional size, 1.50 m. in diameter. Its sides were smoothly and truly cut, and there were two series of foot holes, one on the south, the other on the east side. The depth of the well as excavated was 5.30 m., but it must originally have been a meter or two deeper, for bedrock in this area was cut down considerably by the builders of the Stoa. The ancient well diggers had encountered a mass of hard rock on the west side near the bottom and had left it, going down another meter on the east. The well seems never to have been used; at least there were no whole water jars at the bottom, and it may be that the hardness of the rock caused the project to be abandoned.

The filling was uniform throughout and appears to have been dumped in at one time when the project was abandoned. A dozen boxes full of fragments of pottery, both coarse and fine, were collected. There were, besides, three boxes of fragments of very coarse ware belonging to six or eight domed terracotta ovens of the kind seen in use in the terracotta group illustrated in *Ἐφ. Ἀρχ.*, 1896, pl. 11, though without the high bases. The well also produced some fragments of wood, mostly shapeless, and some animal bones. The date of the deposit is the second quarter of the 6th century B.C., and there is nothing in it that need be later than the five-sixties.

Some of the more interesting objects are described below.

The best preserved and handsomest of the vases is a column krater in the manner of Lydos (Pl. 16, a).²⁸ On one side it has a pair of swans facing each other across a lotus and palmette ornament; there is a row of tongues, alternately black and red.

²⁶ This section has been prepared by Eugene Vanderpool.

²⁷ *Hesperia*, XXIV, 1955, pp. 62-66, 72-75.

²⁸ Inv. P 24943. H. 0.216 m.; Diam. 0.245 m. A few small fragments of body missing; restored. The attribution is by Sir John Beazley.

across the top of the picture. On the other side is a goat, grazing; here there are no tongues across the top. Under each handle there is a swan facing right, and on top of each handle plate there is a swan preening itself. On the top of the rim are rays.

A fragmentary amphora of the one-piece variety ²⁹ has a small decorated panel on either side. On one side (Pl. 16, b) is a very striking bearded head to which an abbreviated body is attached at the lower left; perhaps a male siren. The style is crisp and strong, and the subject unusual. Only fragments remain of the scene in the other panel.

Another pot with a striking scene, this time a small spherical oinochoe (Pl. 16, c), ³⁰ has a pair of grotesque satyr heads glaring at each other across a floral ornament. This vase recalls the amphora just discussed in its vigorous style, its use of red for broad surfaces and its choice of subject, but there are very few details for comparison so that one cannot say for sure if the two are by the same hand.

A tall oinochoe with trefoil mouth and double handle (Pl. 17, c) ³¹ has a figured panel centered on the front of the vase and running almost the entire way around, in contrast to the usual practice on oinochoai of this shape of confining the panel to one side. A man with a short cloak thrown over his shoulders is seen riding a black horse and leading a white one. A hoplite on foot follows behind. The artist has left no space of any size undecorated, and has drawn a bird in flight in front of the horses, a panther cub under their bellies and a lotus bud behind the hoplite. The figures are ill-proportioned, but the little vase is not without charm.

A small domed lid with a woman's eye on either side of the handle is a unique piece (Pl. 17, a). ³² Apart from the eye, the decoration is all done in added red. At the center of the underside is a large rounded protuberance. The lid fits none of the vases found in the well.

Among the black-glazed vases, skyphoi predominate. They are mostly of "Corinthian" type with thin walls, a deep bowl tapering slightly towards the bottom, a spreading foot and two horizontal handles just below the lip; there are one or two red lines around the body below the handles. The reserved band above the foot is decorated either with rays as in the case of Plate 18, a ³³ or with added red as on Plate 18, b. ³⁴ Rays are the normal decoration above the foot of "Corinthian" skyphoi and are found throughout the long history of the shape from the late 7th to the early

²⁹ Inv. P 24944. Pres. H. 0.24 m.; Diam. 0.24 m. Mended from many fragments. Much of the body is preserved.

³⁰ Inv. P 24945. Pres. H. 0.125 m.; Diam. 0.117 m. Mouth, handle and fragments of body missing.

³¹ Inv. P 24946. H. to lip 0.185 m.; Diam. 0.115 m. A few fragments of body missing, mostly at back; restored.

³² Inv. P 24947. H. to top of handle 0.05 m.; Diam. 0.116 m. A few fragments missing; restored.

³³ Inv. P 24957. H. 0.096 m.; Diam. 0.14 m.

³⁴ Inv. P 24960. H. 0.076 m.; Diam. 0.12 m.

4th century B.C. Added red on the reserved band above the foot is confined to the early period and is hardly to be found after the middle of the 6th century. At the time our well was filled the red style was at the height of its popularity, a fact borne out by other contemporary Agora deposits. Besides three inventoried pieces there are fragments of at least twenty others in storage. Skyphoi with rays were slightly less popular, with three inventoried examples and fragments of a dozen others in storage.

A skyphos of slightly different shape is represented by a single example (Pl. 18, c).³⁵ It is broader and lower in proportion than the "Corinthian" variety and is all black except for the resting surface of the foot. There are two red lines below the handles and one on the lower body.

Also unique is a small two-handled cup (Pl. 18, d).³⁶ It has an off-set lip which is reserved on the inside and covered with added red, and a small flat bottom also reserved and decorated with a small black circle.

Another small two-handled cup (Pl. 18, f)³⁷ is of a common type, and perhaps a dozen are represented in the well. They have moulded rims and flat bottoms; there is a reserved band at the handles and another just above the bottom.

The kylixes from the well are of "komast" shape; that illustrated is the largest and best preserved of the lot (Pl. 18, e).³⁸ With its small off-set lip, its deep bowl, nearly horizontal handles, and conical foot it is exactly like the figured kylixes with dancing komasts that give the shape its name.³⁹ There are no figured komast kylixes from the well; all are of the variety that is decorated with alternating glazed and reserved areas.

Many kylixes of this general shape and scheme of decoration were made in Ionia, and the fact that some of these were discovered and published many years ago while none were known from Attica has led to the general impression that all such kylixes must be Ionian.⁴⁰ There can be no doubt, however, that ours is Attic and that the type was current in Attica. Not only are there a dozen or more examples in this well (three inventoried and about ten represented by fragments), but others have been found in other Agora deposits of the period. It was, in fact, one of the most popular types of kylix in the first half of the 6th century, being at the height of its popularity in the years 580-560 B.C. The identity in shape and details of decoration with the figured komast cups is a further guarantee of Attic origin.

³⁵ Inv. P 24964. H. 0.095 m.; Diam. 0.15 m.

³⁶ Inv. P 24966. H. 0.058 m.; Diam. 0.11 m. Part of one handle and fragment of lip missing; restored.

³⁷ Inv. P 24967. H. 0.061 m.; Diam. 0.097 m.

³⁸ Inv. P 24973. H. 0.085 m.; Diam. 0.187 m. Fragments of rim and body missing; restored.

³⁹ E. g. *C.V.A.*, New York, Metropolitan Museum, III H, pls. I and XXXVI, 1. It corresponds even in details like the disposition of the glaze under the foot and elsewhere.

⁴⁰ E. Pfuhl, *Malerei und Zeichnung*, I, pp. 194-195. Louvre Nos. F 508-514 (*C.V.A.*, II D, pl. I); J. Sieveking and R. Hackl, *Die Königliche Vasensammlung zu München*, pl. 18, no. 492.

A small black-glazed olpe (Pl. 18, g)⁴¹ is one of several small pitchers with round mouths and slender bodies. Handle and bottom are reserved. There are two red lines around the body below the handle and a single line farther down. Other olpai of this general type have reserved bands or areas on the body, and some of them have a foot instead of a flat bottom.

A small oinochoe (Pl. 18, j)⁴² has a high swung double handle which is reserved and there are two red lines around the middle of the body.

Two shallow bowls, one a lidless lekanis (Pl. 18, h),⁴³ the other an open dish (Pl. 18, i),⁴⁴ may serve as samples of a large number of lekanides and bowls found in the well.

The small amphora with reserved neck (Pl. 18, k)⁴⁵ is not far removed in shape from the Agora amphora with a lotus chain on the neck.⁴⁶

The semi-glazed krater (Pl. 18, l)⁴⁷ resembles the earlier vases of this shape rather than those current from the later 6th century B.C. onwards.

The same is true of the semi-glazed oinochoe (Pl. 18, m).⁴⁸ This class of oinochoe begins in the late 7th century, reaches the height of its popularity in the years around 500 B.C. and lasts well down into the 5th century. The earlier examples contrast with the later ones when the type had become standardized in being of heavier fabric and having their parts less well articulated.

Among the household pots we may single out a cooking pot and stand (Pl. 17, b).⁴⁹ The pot is round-bottomed and round-mouthed and has a single handle. Its outside is heavily blackened by fire. The stand, on which the pot fits nicely, is a half circle. A handle at the back would permit one to push the pot closer to the fire or pull it away, thus regulating the temperature. The holes in the side would permit other adjustments to be made with the aid of a poker; they may also have served for the use of a small spit. Rising spurs at either end of the rim hold the pot firmly in position.

The most remarkable objects from the well are two wooden combs. The larger (Pl. 19, a)⁵⁰ is quite well preserved though some of its teeth are missing and it is split lengthwise into two pieces. It is a double comb with 31 fine teeth at one end and 20

⁴¹ Inv. P 24989. H. 0.14 m.; Diam. 0.068 m. Fragment of lip missing; otherwise intact.

⁴² Inv. P 24988. H. 0.15 m.; Diam. 0.112 m. A few fragments missing; restored.

⁴³ Inv. P 24981. H. 0.041 m.; Diam. 0.135 m.

⁴⁴ Inv. P 24983. H. 0.025 m.; Diam. 0.15 m.

⁴⁵ Inv. P 24986. H. as restored 0.24 m.; Diam. 0.174 m. Foot and fragments of body missing; restored. Broad red band around body below handles.

⁴⁶ Inv. P 18348. *Hesperia*, XVII, 1948, pl. LXV, 1.

⁴⁷ Inv. P 24984. H. 0.182 m.; Diam. 0.325 m. A few fragments missing; restored.

⁴⁸ Inv. P 24987. H. 0.22 m.; Diam. 0.18 m. A few fragments missing; restored. Handle cylindrical in section.

⁴⁹ The pot: Inv. P 25007. H. 0.135 m.; Diam. 0.132 m. About half preserved; restored.

The stand: Inv. P 25008. H. 0.155 m.; Diam. 0.195 m. Fragments missing; restored.

⁵⁰ Inv. W 39. L. 0.136 m.; W. 0.10 m.; Th. 0.018 m.

coarser teeth at the other. Its long sides are slightly concave. It is thickest at the middle and tapers off at the ends. The central space between the two sets of teeth is decorated on one side with a sort of double egg and dart pattern, done with incised lines. The other side seems to have been left plain except for two or three lines along the base of the teeth.

The smaller comb (Pl. 19, b)⁵¹ is much less well preserved, only the middle part with the stubs of the teeth remaining. One of the coarse teeth was recovered separately. It too is a double comb with quite coarse teeth at one end (6 teeth in 0.04 m.) and fine teeth at the other (23 teeth in 0.04 m.). The central part is decorated on one side with a schematic double lotus design, on the other with a linear pattern, faintly preserved.

WELL IN STOA SHOP II

The well in Shop II need not detain us long. It was located in the extreme south-west corner of the shop, and was actually overlaid in part by the Stoa foundations. Its diameter was 1.20 m. at the top and slightly less lower down. Its depth was 12.30 m. from the floor of the shop but it must once have been 1.50-2.00 m. deeper, for bedrock was cut down somewhat by the Stoa builders. There was a single row of foot holes.

The Stoa builders had discovered the well and had dug down into it for about four meters. They then refilled with poros chips from their own building operation. Below this were various layers of dumped filling dating from the time of the abandonment of the well, and at the bottom were a few fragmentary water jars indicating a brief period of use. The pottery from the various layers of original filling appeared uniform and must date from the last quarter of the 6th century B.C.

The most colorful vase is a semi-glazed pelike (Pl. 19, e),⁵² whose body is reserved and covered with thin glaze wash. Mouth, handles and foot are black, and a pair of black lines with a red line above and below them encircle the body forming a pleasing contrast.

Two black-glazed kylixes (Pl. 19, d and f)⁵³ have off-set lips and short thick stems with a raised red ring around them.

Of the two black-glazed oinochoai, one (Pl. 19, c)⁵⁴ has a raised ring around its neck giving it a somewhat earlier look than its companion (Pl. 19, g).⁵⁵

⁵¹ Inv. W 40. Pres. L. 0.062 m.; Pres. W. 0.053 m.

⁵² Inv. P 25271. H. 0.205 m.; Diam. 0.16 m. Fragments missing; restored.

⁵³ Inv. P 25276. H. 0.08 m.; Diam. 0.178 m. Fragments of rim and body missing; restored.

Graffito under foot ΠΙΣ; abbreviation of owner's name.

Inv. P 25275. H. 0.085 m.; Diam. 0.18 m. A few fragments of rim missing; restored.

⁵⁴ Inv. P 24724. H. 0.143 m.; Diam. 0.127 m.

⁵⁵ Inv. P 24723. H. 0.147 m.; Diam. 0.116 m.

WELL IN STOA SHOP III

The well in Shop III was located at the north edge of the room and partly under the cross wall between Shops III and IV. Its diameter was about 1.20 m. and it was neatly cut with two sets of foot holes. Its depth was 13.25 m. below the floor of the shop; originally it must have been a meter or so deeper, for bedrock at this point has been cut down by the Stoa builders.

The mouth of the well was overlaid by a large conglomerate block placed by the Stoa builders to seal it. Below this there was a packing of field stones and earth to a depth of about 11 meters containing very little pottery, all of it fragmentary. This fill must have been thrown in at the time the well was abandoned. The bottom two meters or so contained masses of pottery including many complete water jars and black-figured vases some of which are described below. These vases must have fallen into the well during the period when it was in use. There was no appreciable difference in date between the two fillings; the well appears to have been in use for some years in the last quarter of the 6th century B.C. and to have been abandoned about 500 B.C.

The most important vase is a fragmentary oinochoe by the Amasis Painter (Pl. 20).⁵⁶ In the figured panel we have a symposium; a bearded man and a youth recline on a couch, each holding a drinking cup in his hand. Food is spread on a low table in front of the couch, a young male attendant stands at the head and a flute girl at the foot.

Comparison with the two signed oinochoai of the same shape in the Louvre and in Würzburg⁵⁷ and with other later vases makes the attribution to the Amasis Painter certain. The vase was evidently much prized by its original owner, for when it broke he had it carefully mended with lead clamps, two of which are visible in our illustration behind the heads of the banqueters.

A small amphora of Panathenaic type (Pl. 21, a)⁵⁸ has on one side a figure of Athena striding to the left, carrying a shield and spear. The device on her shield is a pair of dolphins, done in added white. On either side of her is a column surmounted by an owl. On the reverse is a charioteer driving a four-horse chariot.

A neck-amphora with globular body is of unusual shape (Pl. 21, b).⁵⁹ The mouth

⁵⁶ Inv. P 24673. Est. H. 0.28 m. Mended from many pieces. Missing: the handle, most of the mouth, foot and back of the body, and fragments of the figured panel. There is considerable use of added red and white, and its distribution is fairly clear in the pictures. It may be noted, however, that among the large red dots that decorate the garments, some had a ring of small white dots around them, others did not. The attribution to the Amasis Painter was made by Miss Philippaki at the time of discovery. It has been confirmed by Sir John Beazley.

⁵⁷ Louvre F 30: J. C. Hoppin, *Handbook of Greek Black-Figured Vases*, Paris, 1924, p. 37. Würzburg 384: Hoppin, *op. cit.* p. 39; E. Langlotz, *Griechische Vasen*, Munich, 1932, no. 332, pl. 102.

⁵⁸ Inv. P 24661. H. 0.28 m.; Diam. 0.177 m. Mended from many pieces. One handle, a piece of the mouth and a few small fragments of the walls missing. Restored.

⁵⁹ Inv. P 24677. H. 0.378 m.; Diam. 0.284 m. Intact except for chips.

is flaring and ridged in three degrees, the lowest one red. There is a raised ring, likewise red, at the junction of neck and body. The foot is in the shape of an inverted echinus with a rather wide groove near the edge. The figured decoration is in a panel on either side. On the obverse, a wreathed man, seated on a folding stool and holding a sceptre, is offered a flower by a girl standing in front of him. There is a similar scene on the reverse, but the composition is more crowded, there being a youth and a girl behind the seated figure. The seated man himself lacks wreath and sceptre and the girl in front of him lacks the flower. This panel likewise differs from the other in having a row of tongues across the top.

Still another amphora is one of standard shape (Pl. 22, a).⁶⁰ On one side Dionysos stands between dancing satyrs, on the other is a mounted maenad, likewise between satyrs.

An interesting import piece, probably from Rhodes, is a Fikellura amphora which belongs to the Volute Zone Group, one of the largest and latest classes of Fikellura (Pl. 22, e).⁶¹ The discovery of this piece in a deposit of the last quarter of the 6th century B.C. confirms the date already assigned to the group.

The well also contained many plain water jars of sandy micaceous clay, the usual Athenian fabric. Fourteen complete or nearly complete examples have been catalogued, ten amphorae, three hydriai and one oinochoe, and there are fragments of dozens of others. I illustrate one example of each shape (Pl. 22, b-d).⁶²

The hydria is of particular interest, for on the upper surface of the mouth there is an incised inscription *Τίτας ὀλυμπιον[ί]κος καταπύγον* (Pl. 22, f).

Titas. This name has not to my knowledge been reported. It is a reasonable enough name, however, for *titas* is the title of a magistrate at Gortyn in Crete,⁶³ and personal names are sometimes derived from official titles.⁶⁴ Our *Titas* then may have been a Cretan athlete training in Athens or come to compete in the Panathenaic Games.

Olympionikos. For the omission of the M, see P. Kretschmer, *Griechischen Vasenschriften*, p. 162. The letters NIK are not certain, but the restoration seems

⁶⁰ Inv. P 24679. H. 0.32 m.; Diam. 0.205 m. Mended from many pieces. Handles missing; restored; also chips here and there.

⁶¹ Inv. P 24676. Pres. H. 0.175 m.; Diam. est. 0.26 m. Mended from several pieces. Foot and much of lower half of body preserved. On Fikellura pottery see R. M. Cook in *B.S.A.*, XXXIV, 1933-34, pp. 1-98 (pp. 30-33 for Volute Zone Group). There is much new material on Fikellura in the recent *C.V.A.*, British Museum, Fasc. 8, pp. 1-13, also by R. M. Cook.

⁶² Oinochoe: Inv. P 24667. H. 0.20 m.; Diam. 0.185 m. Intact save fragment of mouth.

Hydria: Inv. P 24910. H. 0.375 m.; Diam. 0.35 m. Wall fragments missing; restored.

Amphora: Inv. P 24912. H. 0.275 m.; Diam. 0.25 m. Fragments of wall and foot missing; restored. On neck a graffito in large letters (H. 0.03 m.) LV: abbreviation of owner's name. Three other plain amphorae from this well have the same abbreviation in the same place.

⁶³ Liddell and Scott, *Greek-English Lexicon*, s. v.; *Inscr. Creticae* IV, p. 70.

⁶⁴ F. Bechtel, *Hist. Personennamen*, pp. 514-515 lists a good number.

most probable.⁶⁵ Of the N only the left upright is preserved; a horizontal line at its lower right end is best regarded as a mistake or a chance mark; note that it is very short and does not carry across the break which occurs here. Similarly there is a horizontal stroke across the bottom of the K. This too must be regarded as a mistake; if accepted, the letter can only be a B or a thin, poorly formed Δ.

Katapygon. The third letter was originally written A, then corrected to T.

This insulting inscription⁶⁶ is even more insulting than appears at first sight for we must remember that hydriai of bronze were often given as prizes in athletic contests, and the commemorative inscription is sometimes placed on the mouth as here. The best example is a bronze hydria in Providence which is similar to ours in shape, but slightly less plump; the inscription on the mouth shows that it was a prize "from the games at Thebes."⁶⁷

LANDSCAPING

The systematic landscaping of the excavated area which began in November of 1954 was prosecuted vigorously throughout the planting season of the following winter and early spring under the direction of Mr. Ralph E. Griswold of Pittsburgh.⁶⁸ During Mr. Griswold's absence in America maintenance is supervised by Mr. E. Vathes of the Superior School of Agriculture.

One of the first moves was the installation of a water system. A network of underground pipes has now been laid throughout the western half of the area, and the laying of a main from west to east across the southern, upper part of the excavations will simplify the completion of the system when the east side becomes available.⁶⁹

The landscaping of Kolonos Agoraios, the gentle hill which bounds the west side of the Agora, was largely completed in the first season's work (Pl. 23). The modern enclosure walls having been removed from around the Temple of Hephaistos, earth terraces were constructed along its north and east sides. The temple garden attested

⁶⁵ Another possible restoration, *Olympiodoros*, does not yield satisfactory sense.

⁶⁶ For other examples see *Hesperia*, XXII, 1953, pp. 217 ff.

⁶⁷ *A.J.A.*, XLVI, 1942, pp. 180-182, figs. 12, 13, with bibliography; add Beazley, *Greek Vases in Poland*, p. 20 and note 3.

⁶⁸ *Hesperia*, XXIV, 1955, pp. 70-71. This year as last grateful acknowledgment must be made to the many organizations and individuals who have assisted the landscaping program in one way or another. The Athenian Committee for the Landscaping of the Agora has continued its activity by raising money. Attic landowners have again contributed nursery stock. The Boy Scouts and Sea Scouts of Athens and Attica have assisted in the actual planting, while the Athenian Committee and the Association of Autochthonous Athenians have set out symbolic trees. The restoration of the "Garden of Hephaistos" was made possible by the Garden Club and a number of residents of Princeton, New Jersey, while residents of Providence, Rhode Island have assumed responsibility for the landscaping around the Church of the Holy Apostles. Many individuals have contributed trees, shrubs and benches, often as memorials to friends or relatives.

⁶⁹ Thanks are again due to the staff of the Water Company of Athens for much technical assistance in connection with the installation.

by the ancient planting holes which came to light in the excavations of 1936⁷⁰ was replanted with an inner row of pomegranate and an outer row of myrtle parallel to the south, west and north sides of the building. Many native shrubs and a few trees have been set out informally on the hill slopes while the comparatively level top of the hill to the south of the temple has been reserved for low shrubs and wild flowers which will not interfere with the view of the building as seen from the most common approach. The Ministry of Public Works and Communications in the Greek Government has re-routed to the west the busy, noisy street which previously ran so close past the west end of the temple; this will restore some measure of peace to the ancient sanctuary and will also permit continuity between the new landscaping on Kolonos and the well established park to the west of the temple. On the east side of Kolonos two winding pathways with steps at intervals now lead down into the excavations; to one going in the other direction they afford glimpses of the temple and its sculptures from many different angles.

A belvedere situated on the brow of Kolonos above the Tholos is intended to honor the memory of Professor Edward Capps who was so largely responsible for the initiation of the Agora Excavations.

Grading, the surfacing of paths and actual planting have been carried out in the western part of the Agora proper between Kolonos and the Odeion. The trees and shrubs have been carefully plotted in relation to the monuments and have been distributed rather sparsely so that when they attain their growth they will not obscure the layout of the ancient square. A number of park benches with seats of cypress wood supported by limestone ends have been placed in shady spots commanding attractive views.

CONSERVATION OF THE CHURCH OF THE HOLY APOSTLES (Pl. 24)

In 1954 the modern additions had been stripped from the 11th century Church of the Holy Apostles which rises above the extreme southeast corner of the ancient Agora, and a beginning was made on restoring the structure to its original form.⁷¹ Throughout 1955 the work of restoration has continued with a small force of skilled craftsmen working under the supervision of John Travlos and Alison Frantz.⁷²

Within the past year much additional work has been done toward repairing and strengthening the old walls of the building. The interior has been re-plastered in a tone chosen to harmonize with the few surviving remnants of mural paintings. The

⁷⁰ *Hesperia*, VI, 1937, pp. 396-425.

⁷¹ *Hesperia*, XXIV, 1955, pp. 55-57, fig. 2 (plans), pl. 25.

⁷² The Samuel H. Kress Foundation of New York City has generously renewed its financial support of this undertaking. The project has continued to profit from the counsel of Professor A. Orlandos and Mr. E. Stikas of the Department of Restoration in the Greek Ministry of Education under whose general oversight the work is being carried out. Practical assistance has been rendered on many occasions by the technical staff of the Stoa of Attalos Project.

cupola has been restored to its light and graceful original form by the removal of the rubble masonry with which the alternate windows had been closed and by the replacement of the mullions. The windows throughout the church are being restored in the Byzantine style with small round lights. A floor of large marble slabs in a simple pattern has been laid in the interior.

The principal effort of the year has been devoted to the reconstruction of the narthex or vestibule at the west end of the church. This part of the building had perished in the vicissitudes of time except for its foundations and irregular sections of the north and south walls. A close study of the surviving remains, supplemented by the analogy of the most nearly comparable building, viz. the Church of the Palaio-panagia at Manolada in the northwestern Peloponnese, has permitted the recovery of the design. The narthex has been restored with three saucer domes (Pl. 24, b), the middle one being slightly higher than its neighbors; its roof is saddle-shaped with gables to north and south. Groin vaults have been used above the irregular spaces flanking the west apse. The surviving foundations of the west wall of the narthex provided evidence for three doors, and a still more precise reconstruction was made possible by the discovery of fragments of the marble door frames which had been re-used in late repairs in the church itself and in the construction of neighboring houses.

A set of wall paintings removed from the Chapel of St. Spiridon, which had stood some 50 meters to the northeast of the Holy Apostles until it was demolished in 1939 to permit the exploration of the Library of Pantainos, is being set up on the walls of the narthex. In addition to providing a good permanent home for these "displaced paintings," this measure will add a touch of warmth to the otherwise bare walls of the narthex, and will make readily accessible to the public some characteristic specimens of late Byzantine painting (16th-17th century).⁷³

Studies are now being made for the restoration of the churchyard and for the landscaping of the area.

THE STOA OF ATTALOS PROJECT

The reconstruction of the Stoa of Attalos (Pls. 25-27), begun in midsummer of 1953, had reached the half way mark by midsummer of 1955.⁷⁴ The two-storeyed

⁷³ *Hesperia*, IV, 1935, pp. 448-469; IX, 1940, pp. 293 f.; X, 1941, pp. 193-198.

⁷⁴ For earlier reports on the project, cf. *Hesperia*, XXIII, 1954, pp. 55-57; XXIV, 1955, pp. 59-61.

Mr. Manuel A. Tavarez, the representative of the supervising firm of W. Stuart Thompson and Phelps Barnum of New York City, continues to serve as engineer in charge of construction. Dr. John Travlos, assisted by Mr. M. Kourouniotes, retains responsibility for the original design of the building and for such modifications as are required for its future use. Mr. Kostas Mastoris directs the working and setting of the stone and marble; Mr. George Biris is Consultant Engineer with particular responsibility for the concrete work. The success thus far achieved is due very largely to the individual devotion of these men in combination with a remarkable esprit de corps that has

colonnade erected by Attalos II, King of Pergamon 159-138 B.C., along the east side of the square is being rebuilt primarily to house the objects found in the excavation of the Agora. As the work progresses it becomes increasingly clear that the reconstruction will help in other ways as well: by providing an effective screen between the ancient market place and the modern city and by affording a unique opportunity for the appreciation of the scale and spatial effect of an outstanding example of civic architecture of the Hellenistic period.

In the beginning work was concentrated on the northern two thirds of the Stoa but early in 1955 the decision was taken to proceed immediately with the reconstruction of the whole building throughout its length of *ca.* 382 feet.

Within the year wooden shelving has been installed in the basement storerooms and much archaeological material has already been transferred from the temporary quarters in the Excavation House. All the marble inscriptions, some 6700 in number, have been placed in the West Storeroom beneath the Stoa terrace which is now functioning as an epigraphical museum. Some 5000 containers of documentary pottery, i. e. potsherds of value for their context, have likewise been moved and shelved in the East Storeroom.

The first new columns of the lower storey were erected in November, 1954. By the end of 1955 all of the 22 Ionic columns (Pl. 25, b) had been completed and 42 of the total of 45 outer Doric columns (Pl. 25, a). Work on the southernmost three columns of this series has been slowed by the decision to include in the reconstruction in this part of the building representative pieces of the ancient architectural members so that the visitor, who will perforce enter the building near this point, will have immediately before him evidence for the reconstruction.

As the Doric columns were erected the entablature was placed above them (Pl. 26, a). At the same time the long walls that bounded the shops front and back were being carried up so that by the end of the year all of the floor of the upper storey had been laid with the exception of a small section near the south end. In view of the grievous damage done to the building by the burning of its wooden floors and roof supports in A.D. 267, it has been decided to use reinforced concrete rather than timber in these parts of the Stoa. The underside of the concrete will be concealed, however, by a semblance of the ancient beams and rafters worked out in laminated wood, while the floors will be surfaced with terrazzo resembling the rough mosaic of marble chips of which remnants were found in the ancient building.

developed among the foremen and craftsmen. Much credit must be assigned also to the rapid delivery of essential materials by the Dionysos-Pentelikon Marble Company, the Drapetsona Limestone Quarry and the Herakles Cement Company. American suppliers of building material have likewise been prompt in their deliveries and in many cases have made special concessions in view of the nature of the undertaking.

Professor A. Orlandos, Director of the Department of Restoration in the Greek Ministry of Education, under whose general oversight the reconstruction is being carried out, has continued to give the enterprise the benefit of his great knowledge and experience.

The alcove or exhedra beneath the north stairway has been completed with the arched mouth for which incontrovertible evidence was found in the corresponding place at the south end of the building (Pl. 25, b). As the earliest known example of a visible arch in an Athenian building this feature is of considerable interest to the student of architecture. An arched window of the same span has been restored in the outer wall of the building at the back of the alcove and a barrel vault has been erected between the two arches to sustain the weight of the stairway above.

The first five columns of the upper storey had been erected by the close of December 1955; these were the northernmost of the inner "Pergamene" series (Pl. 27). By the same date the back wall of the building had been carried up to the level of the cornice over much of its length and a large proportion of the marble members of the upper storey were worked and ready for setting. The manufacture of the terracotta roof tiles was begun late in the summer of 1955 and several hundred had been delivered by the end of the year.

The reconstruction has been illuminating for many of the technical aspects of ancient construction, not least for the fluting of the columns. In keeping with the normal practice in stoas only the outer row of columns was fluted on each floor, since only they could profit fully from the sun. The front columns of the upper storey being comparatively short are monolithic so that they can be more easily fluted before rather than after setting. The shafts of the lower front columns, on the other hand, are built up each of three drums. If these drums had been channeled individually before erection superhuman care would have been required to assure exact alignment. The solution adopted by the ancients and followed by the modern restorers is to start the fluting before setting at top and bottom and to complete it after setting. For this operation the marble cutters have worked in teams of four per column (Pl. 26, b). The first column required *ca.* 76 man-days of labor for the fluting alone and the cost came to a little over 9,000 drachmai or \$300; with experience the time and cost per unit have been somewhat reduced. The fluting of the east columns of the Erechtheion, as we know from the building accounts of 407/6 B.C., was done by teams of five, six or seven men at a cost of 350 drachmai each, so that at the current rates the labor presumably amounted to 350 man-days per column.⁷⁵ It is to be remembered, however, that the columns of the Stoa are somewhat shorter than those of the Erechtheion (5.237 m.: 6.586 m.), that in the bottom 1.60 meters they are faceted rather than fluted, and that their surface finish is less fine.

It is anticipated that the museum installation in the lower storey of the Stoa will be ready for dedication by the autumn of 1956 and that the whole building will be completed early in the following year.

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⁷⁵ J. M. Paton, *The Erechtheum*, Cambridge, Mass., 1927, pp. 411-413.

NOTE ON A FRAGMENT OF AN ARCHAIC INSCRIPTION FROM DREROS

(PLATE 27)

IN August 1953, while examining a building which the excavators suggest may have been the Prytaneion at Dreros in Crete, I came upon a rough fragment of stone bearing archaic letters inscribed boustrophedon (Pl. 27, a). Although it turned out not to be a new find, there are at least four reasons for calling renewed attention to it: (1) no photograph has previously been published; (2) at least one correction must be made in the facsimile illustration and proposed transcription in the preliminary publication; (3) there are minor discrepancies in the publication as to its physical description; (4) along with several related texts, it forms part of an important late 7th or early 6th century B.C. judicial-religious code which deserves continued careful study and the fullest and most accurate documentation.¹

In their initial publication² the excavators state that there can be no doubt that these thirteen blocks were originally built into the east wall of the contiguous archaic temple of Apollo, and that when this wall collapsed they fell into the cistern, which was already out of use and partially filled up. Their reference to a parallel in the Pythion of Gortyna makes it clear that they believe that the inscribed blocks faced outward. The texts seem to belong to eight separate and somewhat fragmentary inscriptions. One was published in 1937, the others in 1946.³

Our fragment is shown in facsimile (Pl. 27, b)⁴ forming a close join with the left

¹ Thirteen blocks inscribed with archaic letters were discovered in 1936 in the fill of a large Hellenistic cistern which lies a stone's throw to the southwest of the spot where I found the fragment in question. Although they were not particularly bulky or heavy, all but one of the texts were apparently left on the site. I have since been told that several were seen lying at the bottom of the cistern only a few years ago, but as far as I could see, there are none there now. A reasonably careful search failed to turn up any other fragments on the surface of the ground in the immediate vicinity. I conveyed the one fragment in my knapsack to Herakleion where it can now be found in the epigraphical apotheke of the Archaeological Museum. I wish to thank the curator, Dr. Platon, for permission to photograph, measure and study the stone. I have also to thank Miss L. H. Jeffrey of the British School of Archaeology in Athens for its primary identification. Professor Henri Van Effenterre, the original publisher, has been generous in discussing the fragment by letter.

² P. Demargne and H. Van Effenterre, *B.C.H.*, LXI, 1937, pp. 27-32, 333-348.

³ Cf. note 2 for the longest; six were published by Van Effenterre in *B.C.H.*, LXX, 1946, pp. 588-606 with photographs of four on pl. XXX and facsimiles of all; the eighth, an Eteo-Cretan and Greek text, may be studied in *Revue de Philologie*, XX, 1946, pp. 131-138 (mistakenly referred to as "pp. 39 sq." in *B.C.H.*, LXX, 1946, p. 588, note 1). The last mentioned stone is said to be in the near-by Neapolis museum, for which key and keeper were missing during my visit.

⁴ The facsimile is reproduced with the kind permission of Professor Van Effenterre from *B.C.H.*, LXX, 1946, p. 602.

edge of a larger section of the same document (text No. 5). Its thickness of *ca.* 0.03 m., as compared with 0.23 m. for the whole block, shows that it was broken out of the face of the main piece in a fashion similar to a section shown in the facsimile as missing from the right-hand end at the time of discovery in 1936.⁵

The material is a variety of limestone common in that area, locally called *sidero-petra*. It is fine-grained and splits easily along fairly even planes. The very dark blue-gray color of the surface is apparently the result of oxidation. Percussion produces on it a very light gray, almost white effect due to the finely pulverized powder which results. As can be seen from Plate 27, a, the letters are so clear and fresh that one's first impression is that the inscription was made quite recently.⁶ It is extremely difficult to believe that it could have been exposed to the weather for the length of time implied in the publication (i. e. the Archaic to the Hellenistic period).

The over-all maximum length of our fragment is 0.29 m. and the maximum height 0.165 m. Although there are no signs of sawn surfaces, the lower edge is fairly straight and seems to preserve the original limit of the block, except for a small chip broken from the right corner. The left-hand edge is quite irregular, but there can be no doubt that it marks the original limit of the whole document in this direction. Not only do the inscribed letters bend around to follow it closely, but the upper concave section of the edge is worked relatively smooth in the same technique as the letters themselves.⁷ It is not easy to suggest a reason for the rather painstaking smoothing of this surface. It may have been to accommodate a close-fitting contiguous block (possibly inscribed) or some system of bonding into a wall or other structure. It might also have been due to a desire for rough symmetry with a similar depression at the right-hand end of the complete document, which, according to the publisher, probably continued on another block.

The upper edge is definitely broken at the right, but there were no higher inscribed lines on the block and very little of the original surface has been lost. Along the right-hand edge there is a sharp irregular break which makes a close join with the larger part of the block.

The letters on our fragment are perfectly clear and unmistakable except where

⁵ The discrepancy in thickness between the fragment and the main block is not made clear in the publication and might lead to considerable confusion when the smaller piece is examined with the larger section not available for comparison.

⁶ I was at first suspicious that some perverse person had tampered with the stone between 1936 and 1953. Discussion with colleagues in geology strengthened my doubts, although they are naturally cautious about committing themselves without seeing the rock in question. But photographs which Professor Van Effenterre kindly sent me prove that the letters not only of this but also of his text No. 2 showed the same surprising freshness in 1936 when they were first discovered.

⁷ The tooling can readily be seen in Plate 27, a. Although the publication says specifically that there is no working on the block, the 1936 photograph makes this feature quite clear and reference to it was inadvertently omitted.

parts of a few are broken away. They are not sharp in outline or very deep but are formed by a network of small round indentations produced by the punch and hammer. Probably the term "picking" best describes the technique.⁸ The letters vary considerably in size. Extremes of height are 0.05 and 0.027 m.; extremes of width 0.07 and 0.02 m. The *omicrons* are lowest and the 5-bar *mu* widest. The average dimension for both height and width is *ca.* 0.035 m.

The published transcription for the whole of the preserved text runs as follows: ---σ | τυπρηρηια ὁμόσαι δ' ἄπερ ἐν ὀρκιοισι | α --- καθαρὸν γένοιτο. Although the readings are said to be certain, we have clearly to do in the bottom left corner of our fragment, not with an archaic *sigma*, but with *nu tau*. Thus, ὅμονται seems to be the correct reading and not ὁμόσαι as appears in the facsimile and transcription.⁹ There are other discrepancies between our part of the stone and the facsimile. Some of them may be due to the circumstances mentioned in footnote 9. At the top right it is difficult to accept the rounded contour of the (broken) first letter as retrograde *iota*. And the approximately equal length of the two straight strokes preserved of the third letter from the right in the same line would not be realized from the facsimile. Nor would one get the impression from the facsimile that there are three rather distinct forms of *alpha*—one with straight cross-bar, one with sharply sloping cross-bar and curved long stroke at the left, and one where the cross-bar begins from the base of the left-hand long stroke. Finally, the low curving line at the extreme right of the lowest line does not look nearly so much like part of a retrograde *iota* as it does in the facsimile.

The main purpose of these notes is to make the new information available to epigraphers and students of the religion and law of the Archaic period, rather than to propose any controversial readings.¹⁰ It is clear, as Professor Van Effenterre says, that we have to do here with some formula of oath-taking and purification. When one considers them as a group, the inscribed blocks are of such remarkably homogeneous dimensions that, although the techniques of inscription vary, the matter they carry should probably be regarded as a series of related prescriptions. It may be that only

⁸ Nearly all the other stones have chiselled letters, and according to the photographs the depressions are as dark in color as the rest of the surface. Consequently the letters are not nearly as easily legible. But a technique such as ours was used for text No. 2 where the letters are said to have been "gravée comme par un piquetage à la pointe mousse," and a 1936 photograph shows that its letters too stood out clear and white.

⁹ Professor Van Effenterre now accepts this reading. He believes that when it was first discovered some kind of incrustation must have obscured this part of the inscribed surface. This is borne out by the fact that his 1936 photograph is virtually illegible at this point. It appears that the conditions to which it was exposed later rid the surface of the accretion so that the true reading is now unmistakable. One can only hope that the other missing blocks have fared as fortunately.

¹⁰ If the reading is correct, the *πρμ* cluster of consonants in the larger section of the text is foreign to Greek. The publisher suggests the possibility of an Eteo-Cretan word here. My colleague, Professor Tom B. Jones, doubts this and proposes εἰς τὰ πρῶτα νῆμα.

a fraction of the original total is preserved, but it is not impossible that some thread of textual continuity can be established which might in turn indicate the original spacial arrangements of the blocks.

As to where they stood and for how long, the condition of our fragment should form an important clue. It would appear to rule out a situation where they were exposed to the elements for any considerable time, and it might suggest that they were rather quickly superseded and discarded.

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THE GELEDAKIS PAINTER

(PLATES 28-30)

THE handsome Middle Corinthian amphora which was found a few years ago at Corinth, and published in this Journal by Oscar Broneer,¹ has more than one quality to attract notice. The shape itself is unusual for Corinthian ware of this period, and the panelled pictures are painted in a clean, bold style. The main panel has a remarkable subject: a rider mounted on a truncated horse, of which only the forward half is shown. On the reverse side there is a commoner theme, a lion standing to right, with head turned back; but stylistically this part of the vase's decoration is more revealing than the obverse. From the shape of the lion and from the incised details, we may confidently assign this work to the artist who has come to be known as the Geledakis Painter.²

This artist, who belongs to the circle of the Dodwell Painter,³ has a distinctive and fairly consistent style which is usually easy to recognize. To see the mark of his hand on the amphora, we need only to compare the lion on its reverse side (here, Pl. 28, a) with typical animals by the Geledakis Painter, such as the panthers on his "name-piece," the stemmed pyxis in New York (Pl. 28, b-c).⁴ We can see clearly the painter's characteristic manner of rendering anatomical details of felines: the peculiar kidney-bean shape of the line enclosing the shoulder area; the two curved, parallel lines which begin in this area and extend downward into the near foreleg; the strongly

¹ *Hesperia*, XX, 1951, pp. 295-296, pl. 92. For permission to publish the photograph in Pl. 28, a, I am grateful to Professors Oscar Broneer and John L. Caskey; for the use of the remaining illustrations, to the Metropolitan Museum of Art (Pl. 28, b-c); the Oxford University Press (Pl. 29, a-b); C. H. Beck'sche Verlags-Buchhandlung, Munich (Pl. 29, c-d); and Presses Universitaires de France, Paris (Pl. 30, a-c), from Léon Rey, "Fouilles de la mission française à Apollonie d'Illyrie, 1930-1931," *Albania*, IV, 1932, p. 11, fig. 6, p. 13, fig. 9, and p. 15, fig. 13. I wish also to thank Professor H. R. W. Smith for reading my manuscript and making valuable criticisms of it.

² Payne, *Necrocorinthia*, p. 307, under NC 902; cf. also p. 308, top, and remarks under NC 907, 1097-1098, 1384. Benson, J. L., *Geschichte der korinthischen Vasen*, Basel, Schwabe, 1953, pp. 52-53, Sec. 85. For this artist the term "Geledakis Painter" is, as Hopper has pointed out (*B.S.A.*, XLIV, 1949, p. 235, No. 10), a misnomer. Since, however, the name has gained some currency and is conventional in any event, there may be no harm in allowing it to stand (cf. Benson, *loc. cit.*). In Benson's list, the museum number for his No. 2 should read "Oxford 1879.102;" No. 6 should be "New York 06.1021.14." His No. 9 (NC 888; on the attribution, see further below) is also published in Lane, *Greek Pottery*, pl. 26, C; to Benson's *C.V.A.* reference, add "and pl. 7,9."

³ On the Dodwell Painter (concerning whose style more study is needed), see Payne, p. 63 and p. 183, note 2; Amyx, *Cor. Vases* (*Univ. Calif. Publ. Class. Arch.* I: 9, 1943), p. 232, note 126; Hopper, *B.S.A.*, XLIV, 1949, pp. 167-168, p. 213, No. 16, b, p. 240, No. 2; Benson, pp. 45-46, Secs. 73-74.

⁴ Payne, NC 908 and pl. 29, 6 and 8; Benson, p. 52, No. 85.6.

marked belly-line and the heavy, straight, parallel rib-markings; and the fringe of hair along the animal's hindquarters. In the field, the presence of large "whirling" rosettes is also consistent with this artist's style. The drawing on the amphora is neater, but both vases are plainly works of the same hand.

The style of this painter was first recognized by Payne,⁵ who grouped together as products of one hand the stemmed pyxides NC 906-910, the convex pyxides NC 902-903, and the oinochoe NC 1098. Payne's juxtaposition of NC 904 with NC 902-903, and his comments under NC 1097 and NC 1384, also invite comparison of these three vases with those which he attributed to the Geledakis Painter. In my remarks on the artist,⁶ I once observed that the pyxis NC 904 "is very close to his work," and added tentatively an olpe and an oinochoe from Apollonia, published in *Albania*, IV, 1932, p. 11, fig. 6 and p. 15, fig. 13, stating that a third piece, the broad-bottomed oinochoe *ibid.*, p. 10, fig. 4 and p. 13, fig. 9, "is at least related to the style" (for convenience, the three Apollonia vases are reproduced here, Pl. 30, a-c). From the series of vases thus far mentioned, J. L. Benson⁷ has drawn up a systematic list of vases which he would give to this artist. Benson's canon of the Geledakis Painter's work admits, from the foregoing, NC 902-903 (Benson, Nos. 1-2), NC 906-909 (B., Nos. 4-7), NC 1098 (B., No. 8); and adds, as new attributions, a privately owned pyxis in Basel (B., No. 3, pl. 10) and the pyxis in Oxford with handles in the form of female heads, NC 888 (B., No. 9, "wahrscheinlich vom Geledakismaler"). Under the heading, "Manner of the Geledakis Painter," he places NC 904 and the three vases from Apollonia. Benson gives no placement for NC 910, NC 1097, or NC 1384.

In Benson's list, the seven pieces originally attributed by Payne (B., Nos. 1-2, 4-8) appear, so far as they are controllable at present,⁸ convincingly enough to be works of one artist. Furthermore, Benson's addition of the pyxis in Basel (B., No. 3) is certainly correct. On the other hand, it seems to my eyes that the pyxis NC 888 (B., No. 9)⁹ cannot belong to the Geledakis Painter; although there are certain likenesses of style, the painter's characteristic complex of renderings is not present.

If the attribution of NC 888 were correct, it would be a discovery of unusual importance, for it would place an artist of the Dodwellian school squarely in the center of the Middle Corinthian "Delicate Style."¹⁰ But it seems rather to arise from another of those still puzzling instances of a *limited* stylistic correspondence between certain elements of the Delicate Style and the coarser styles which are contemporaneous with it, most pertinently that of the Dodwellian camp.¹¹ It must suffice here

⁵ See above, note 2.

⁶ *Cor. Vases*, p. 224, and p. 232, note 127.

⁷ See above, note 2.

⁸ I have not seen the Bonn oinochoe (NC 1098; Benson, No. 8), which is unpublished.

⁹ *C.V.A.*, Oxford, 2, pl. 5, 8/10/12 and pl. 7, 9; Lane, pl. 26, C.

¹⁰ Payne, pp. 64-65 and NC 881-891; *Cor. Vases*, pp. 209-210.

¹¹ Cf. Payne, p. 64; *Cor. Vases*, pp. 224-225; Benson, p. 95.

to add that the exact nature of these relationships, though they obviously exist, still presents many problems.

Let us turn to the other vases. After further study of the only published illustration of NC 904,¹² I have become all but certain that this vase is not merely a "school-piece," but a work from the painter's own hand. The road to this conclusion leads through NC 1384, a globular oinochoe in London,¹³ which Payne (p. 325) compares stylistically with NC 904. Indeed, a comparison of the griffin-birds on NC 904 with the siren on NC 1384 reveals a strong likelihood that both vases are by one hand; but we can now see quite plainly that the panther on NC 1384 was drawn by the Geledakis Painter. I conclude, therefore, that both vases quite probably belong to him.

The Syracuse oinochoe NC 1097, like the Bonn vase NC 1098 (B., No. 8) with which Payne compares it, is unpublished; both should be kept in mind for future study. Likewise, Payne's attribution of the stemmed pyxis in Palermo, NC 910 (apparently unpublished), should not be forgotten.

The Apollonia vases (Pl. 30, a-c) which are mentioned above present a special problem. They are, I think, rightly placed in close proximity to the Geledakis Painter, but I now agree with Benson that they are not his own. Rather, they appear to be clumsy but reasonably faithful copies made by one or more of his pupils.¹⁴ If, as Hopper thinks,¹⁵ all three vases are by one artist, then the broad-bottomed oinochoe (here, Pl. 30, c), on which the style of painting is most debased, must show the artist already grown weary of copying, and now reverting toward his own wretched style. At least, there is nothing in these three vases to suggest that he was capable of improvement.

It has been said above that the Geledakis Painter decorated the amphora in Corinth, and that NC 1384 surely, NC 904 probably, are also his. There are two other vases which certainly belong to him: the convex pyxides with upright handles Reading

¹² Tillyard, *Hope Vases*, pl. 1, 3.

¹³ British Museum 93.7.12.10; *J.H.S.*, XVIII, 1898, p. 282, fig. 1.

¹⁴ Hopper (*op. cit.*, p. 212, No. 5, p. 234, No. 10, p. 242, No. 7), who gives all three vases to one hand, would place them closer to the Ampersand Painter; but, as Benson rightly observes (p. 53, top), these pieces lack the dryness and angularity of the Ampersand Painter's style, at the same time showing strong "Geledakian" traits. The likenesses in style to the Ampersand Painter (which are outweighed by notable differences) may be the result of parallel lines of descent within the Dodwellian group, that is, through the Geledakis Painter. On the other hand, Benson's placement of the olpe (here, Pl. 30, b) as "perhaps a late work by the painter of the remarkable alabastron *C.V.A.*, Louvre, 6, pl. 3, 15-18" (i. e., MNB 627) seems only to muddy these waters. Benson does not mention Pottier's (*C.V.A.*, *ad loc.*) comparison of MNB 627 with *Délos*, X, pl. 65, 439; nor Payne's (p. 341) with "NC 888 and the related alabastron NC 802;" nor Hopper's opinion (*op. cit.*, p. 192) that it may not be Corinthian. In any case, and in spite of Benson's tentative attribution of NC 888 to the Geledakis Painter, none of these vases is in any way remarkably apt in this context, and the further pursuit of their relationship to the style of the Geledakis Painter seems unprofitable.

¹⁵ See above, note 14.

39.ix.6 (*C.V.A.*, 1, pl. 7, 3a-3d) and Munich S. L. 485 (*C.V.A.*, 3, pl. 144, 1-4).¹⁶ The animals on both of these vases show strongly our painter's habits of rendering. For example, we may compare the panthers of the New York stemmed pyxis, NC 908 (Pl. 28, b-c) with those of the Reading (Pl. 29, a-b) and Munich (Pl. 29, c-d) vases. The Reading pyxis shows a slight deviation from the painter's usual style, in that there is only one line within the enclosed shoulder area (but cf. NC 902: B., No. 1¹⁷), whereas on the Munich vase the quadrupeds have both single and double lines within this area. On both pieces, the faces of the panthers are typically broad-jowled and loaded with circular markings for ears, eyes, nose, and muzzle. Both are done in a somewhat cleaner and more careful vein than is usual for the painter's routine efforts.

With this enlarged repertory of the Geledakis Painter's works, the style of the artist comes into clearer focus. Furthermore, especially after the addition of the Corinth amphora, we can see that the quality of his painting is not so thoroughly bad as it has been judged.¹⁸ The Corinthian "animal-frieze" vases were products of commercialism, often turned out in a hurry, and the range of quality in the works of even the better artists is measurably wide. Our artist's style is burdened with "Dodwellianisms," but he is no mere "lesser Dodwellian." In some ways he stands rather close to his companion (or follower?), the Ampersand Painter,¹⁹ but his hand is much firmer, his renderings more distinctive. And he is capable, as the amphora in Corinth in particular demonstrates, of taking some pains.

Two last observations may be fruitful. The attribution of the globular oinochoe NC 1384, taken with the appearance of lateness in certain other works of the artist, points the way into Late Corinthian. It has long been supposed that the main styles of Middle Corinthian continue on into Late Corinthian I, and a number of significant links have been found to support this belief.²⁰ The attribution of the amphora in Corinth is also significant in this respect, for it is one of only two known vases of this shape which have been placed as early as Middle Corinthian. Payne had already guessed that the other, the Heidelberg amphora NC 1154,²¹ might possibly be a work of the Ampersand Painter.²² These connections lead to the thought that the style of

¹⁶ Professor and Mrs. Ure (*C.V.A.*, text, p. 13) compare the pyxis in Reading with NC 900-904, within which series lie three vases by our artist; Lullies (*C.V.A.*, text, p. 40) has no special placement for the Munich pyxis. The pictures used here are taken from the *C.V.A.* publications of these vases.

¹⁷ *Mon. Ant.*, XXII, 1913, pl. 56, 3.

¹⁸ Cf., for example, Hopper, p. 235, No. 10: "a painter well-nigh as bad" (as the Ampersand Painter).

¹⁹ See above, note 14.

²⁰ For example, in *Cor. Vases*, pp. 210, 219-220, 223, 225-226.

²¹ Cited by Broneer, *op. cit.* Side A only, Payne, pl. 35, 3; both sides now fully published, *C.V.A.*, Heidelberg, 1, pl. 14, 5-6.

²² Benson, pp. 51-52, Sec. 84, and the refs. there cited (without, however, mention of this vase). See also above, note 14. Schauenburg, *C.V.A.*, text, p. 28, does not mention Payne's placement for

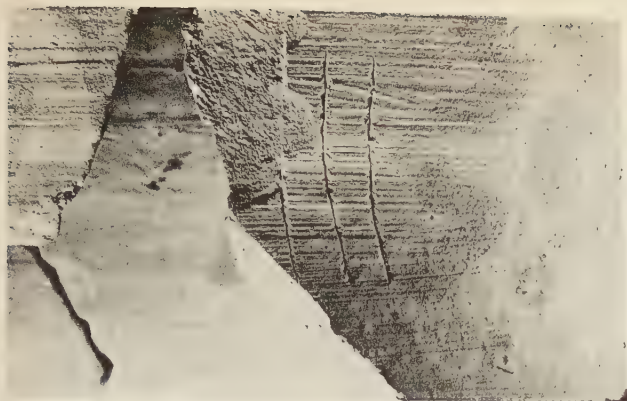
the Dodwellian school may somehow continue into the series of Late Corinthian I amphoras, *NC* 1415 ff. Then, too, the noticeably Atticizing character of this whole class of amphoras²³ has an important bearing on the relationships between Attic and Corinthian vase-painting, and ultimately on the chronology of both wares. But these are matters for another study.

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the amphora. Actual identity with the Ampersand Painter seems doubtful to me, but it is not essential to the point made here.

²³ Atticizing in the shape itself; in the use (on the Late Corinthian vases) of a red-ground slip; and in numerous features of style which await more detailed investigation (cf. Payne, p. 58; also, for example, his opinion, p. 328, that elements of the style leading to Lydos are recognizable in the hydria *NC* 1449).



No. 1



No. 7



No. 8



No. 9



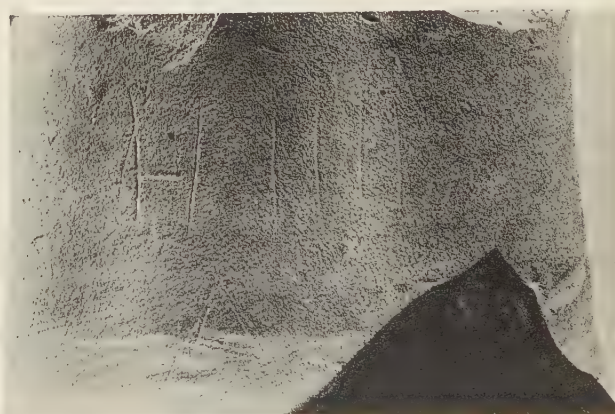
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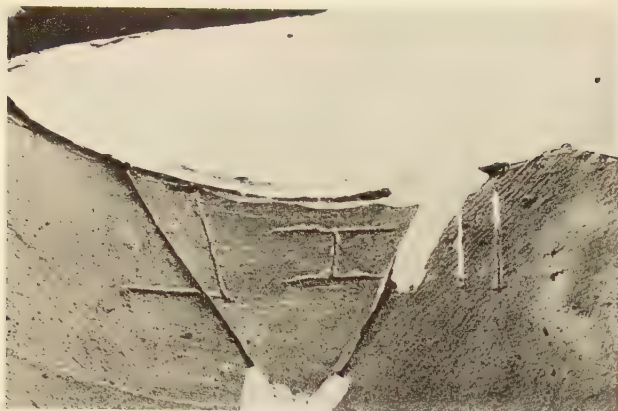
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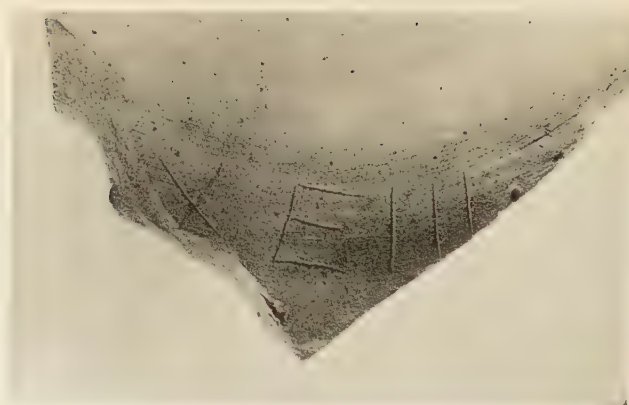
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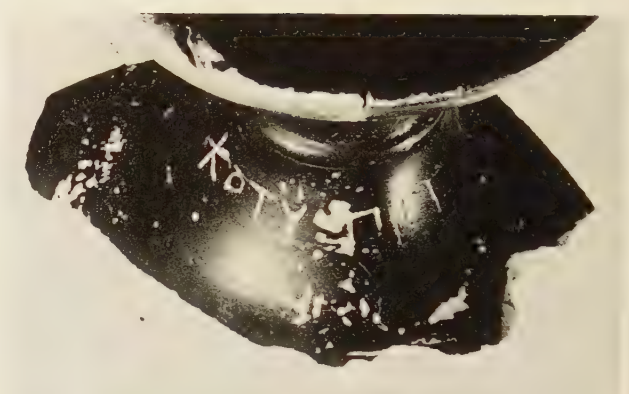
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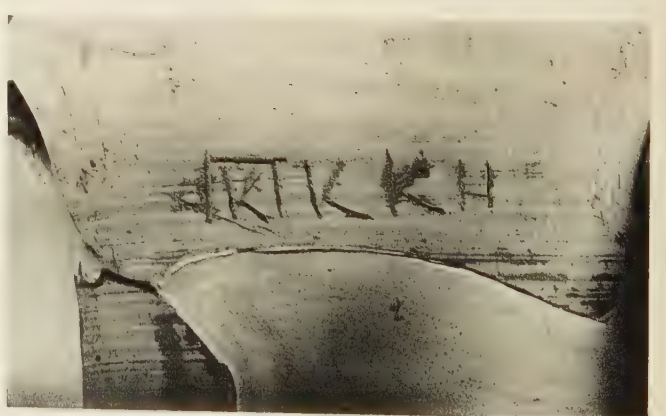
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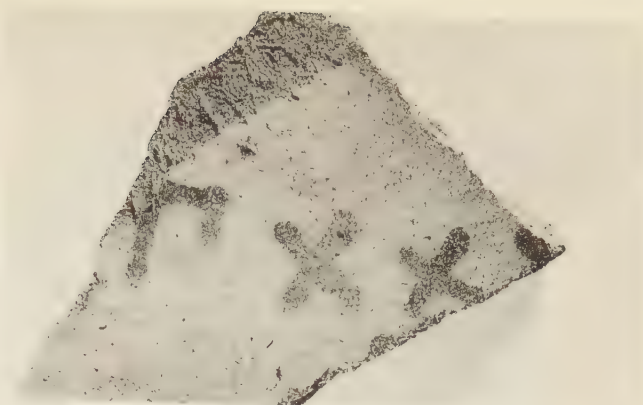
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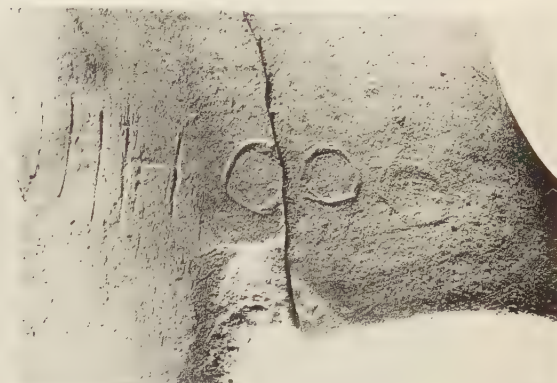
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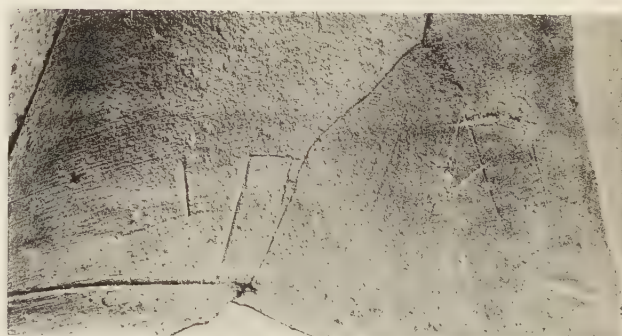
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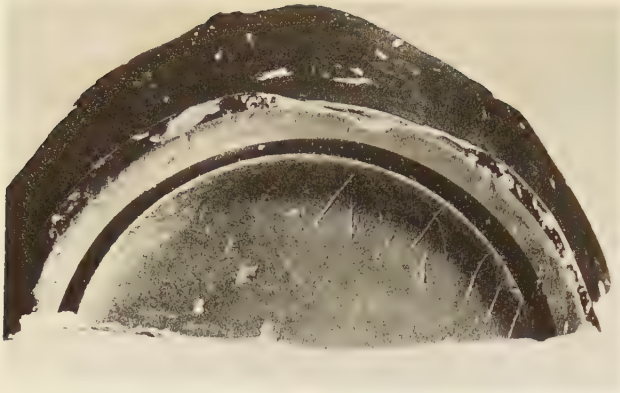
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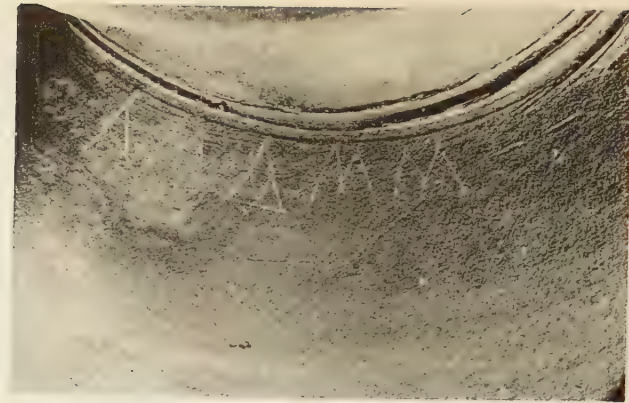
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No. 71a



No. 77



No. 71b



No. 79



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No. 82



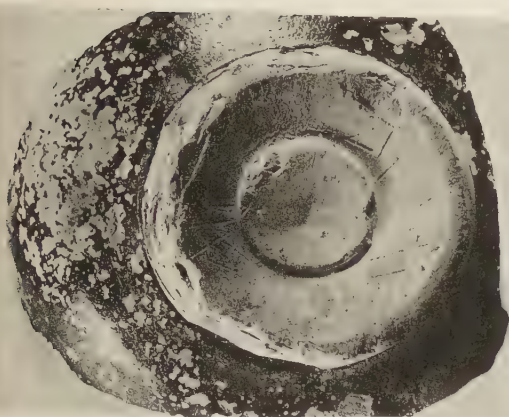
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No. 101b



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No. 15



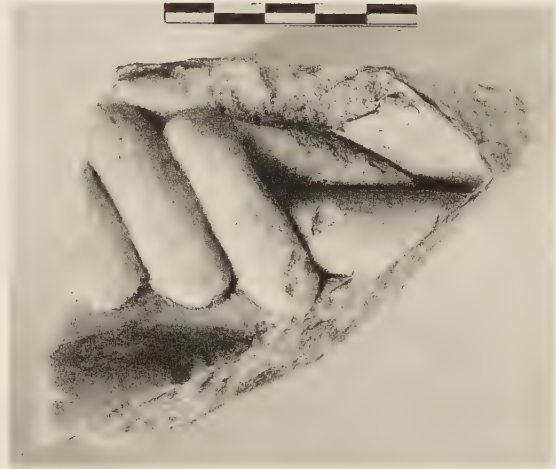
No.



a. Stele in New York with Cast of Agora Fragment A
(*Courtesy of the Metropolitan Museum of Art*)



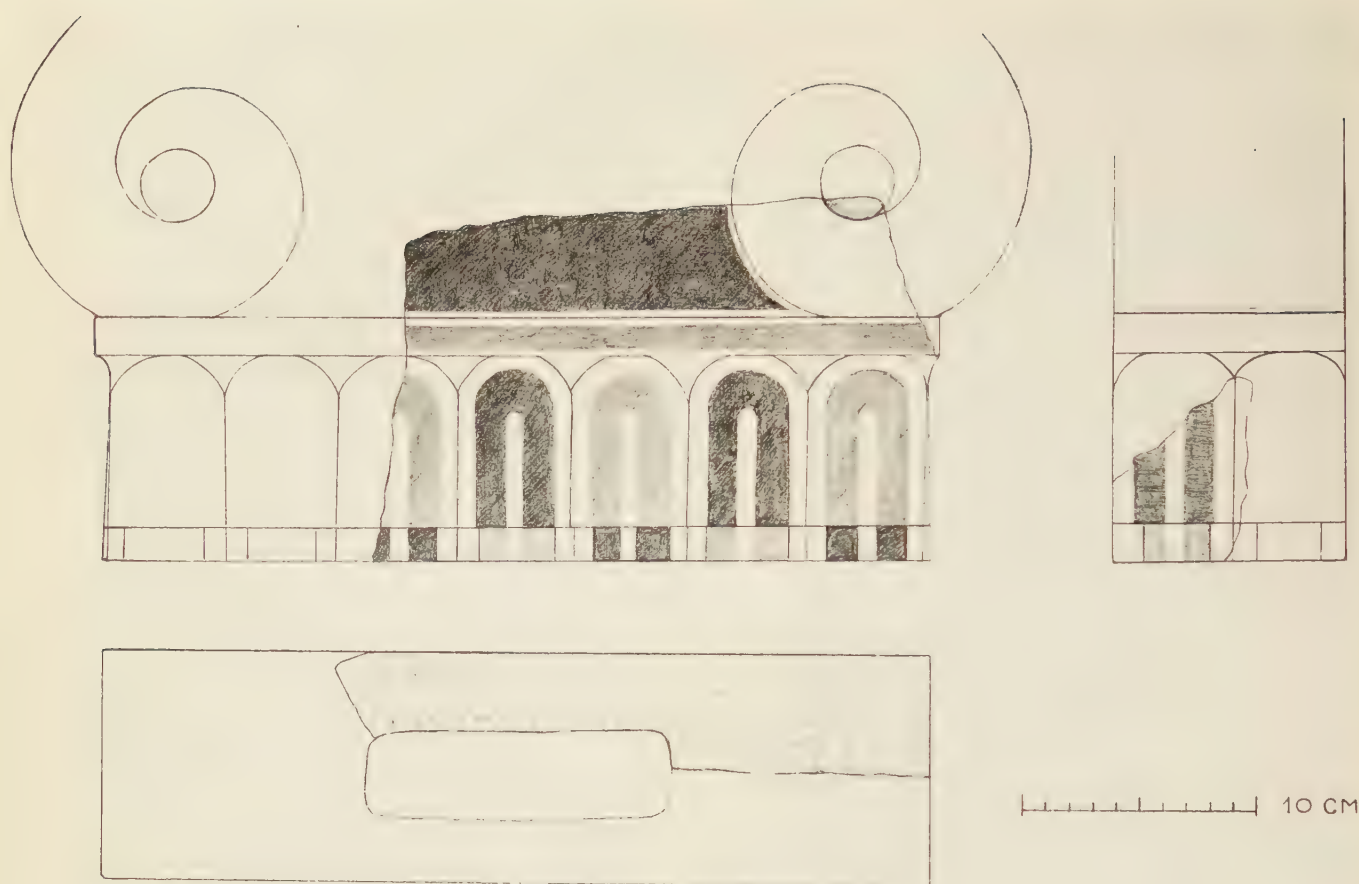
c. Diskophoros Stele, Athens (N.M. 38)



b. Hand A from Agora (S 1751)



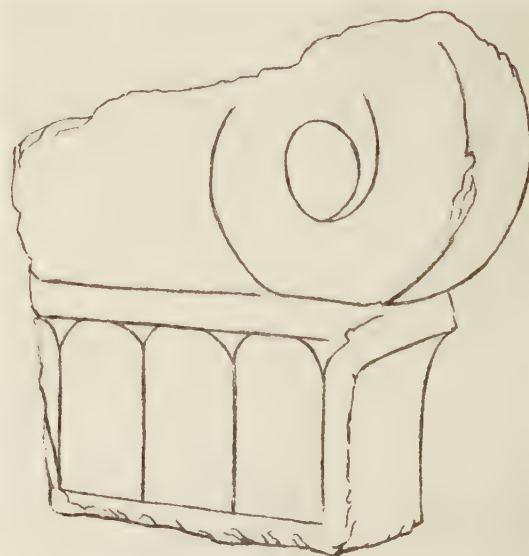
d. Fragment in Athens (N.M. 83)



a. Drawing of Agora Fragment B



b. Fragment of Finial B from Agora (S1438)



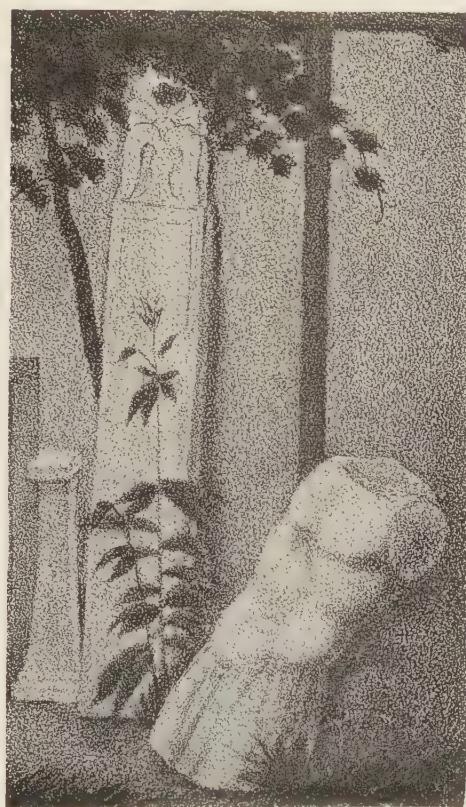
c. Fragment of Finial Formerly in Athens, National Museum (from Conze)



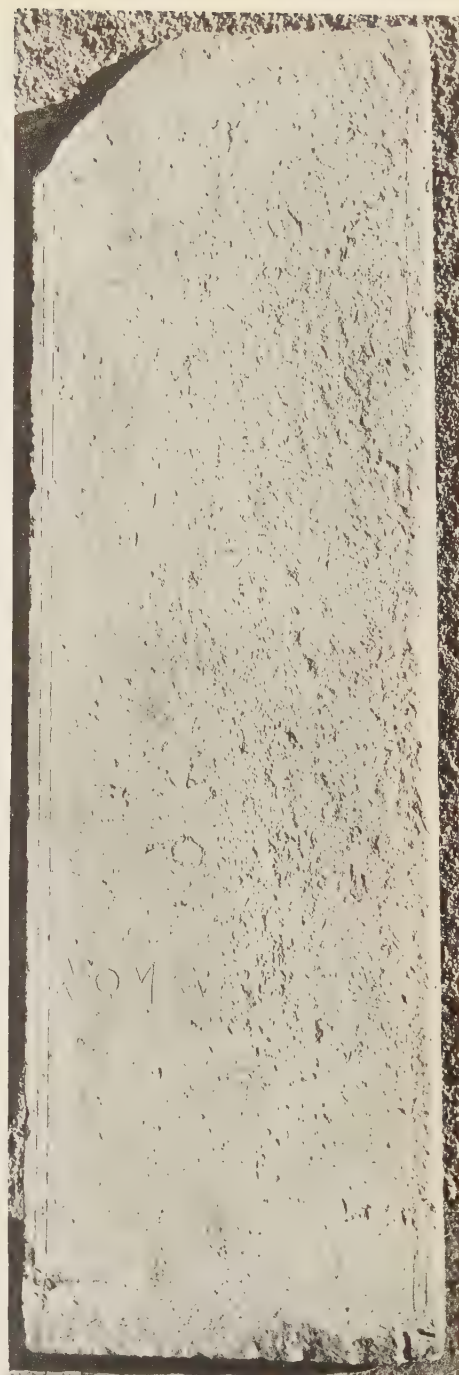
a. Fauvel at Home (Dupré)



ΣΟΛΟΜΩΝ

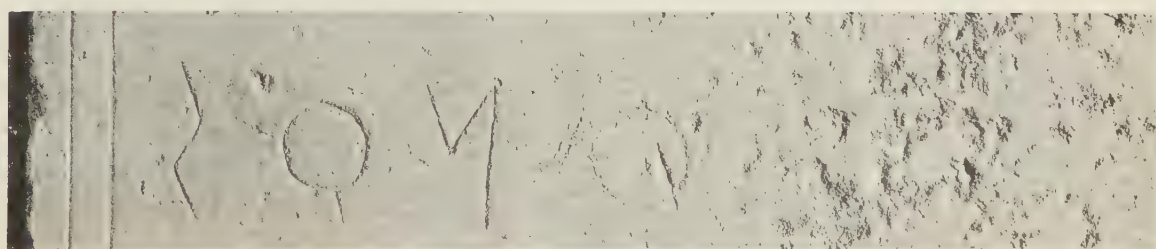


b. Detail of a.



d. Fragment of Stele of Theron, C (I 2056)

c. Stele of Theron
(Conze after
Vulliamy)



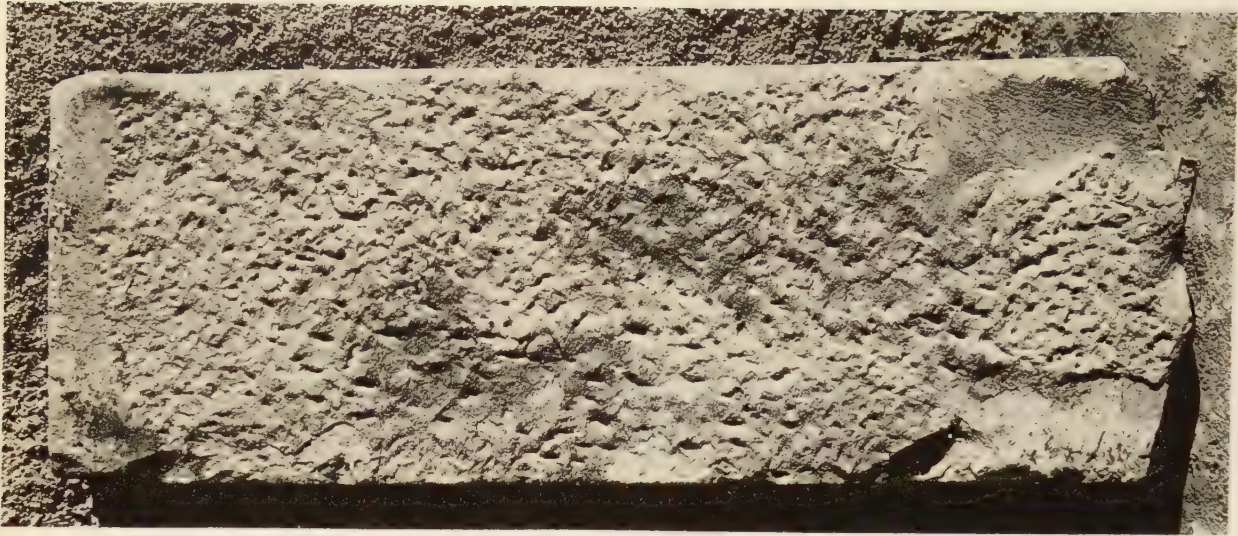
e. Detail of Stele of Theron



a. Stele from the Themistoklean Wall

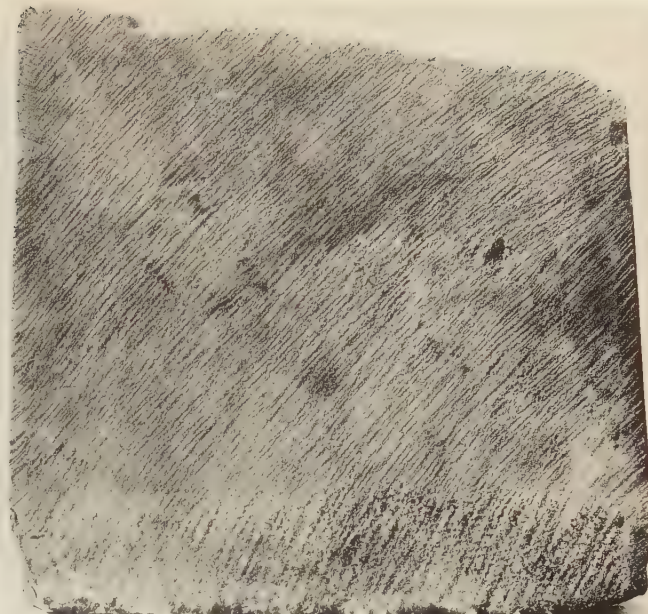
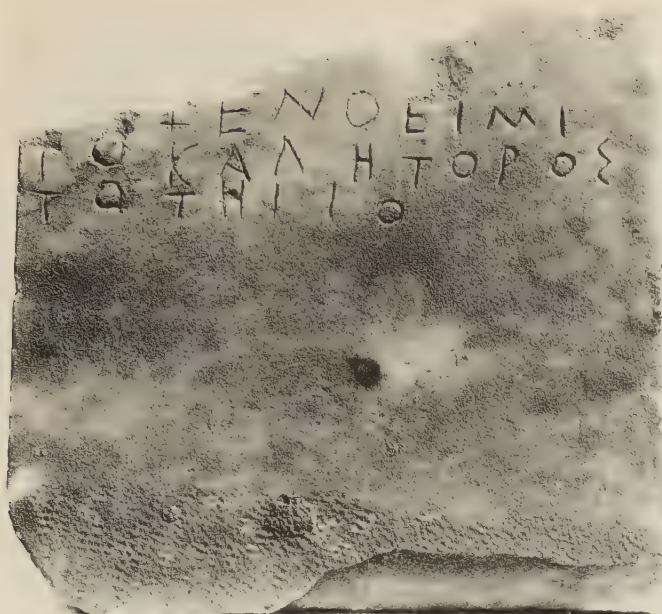


b. Detail of Head on D



c. Fragment of Stele D (S 1736)

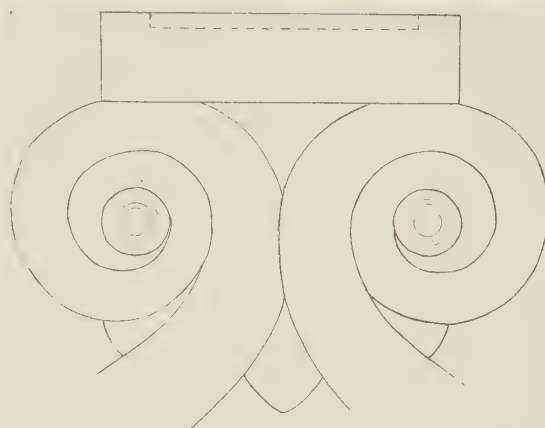
EVELYN B. HARRISON: ARCHAIC GRAVESTONES FROM THE ATHENIAN AGORA



a-b. Fragment of Stele in Athens (E.M. 416)

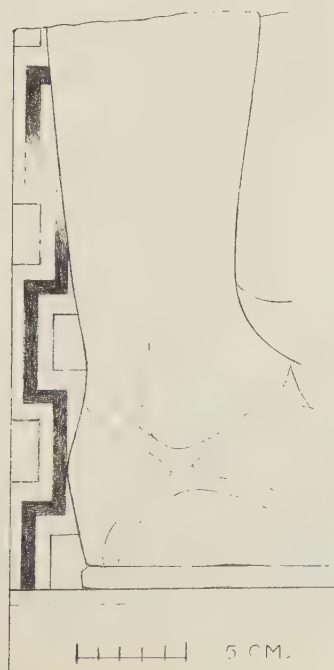


c. Fragment of Capital in Athens (N.M. 84)

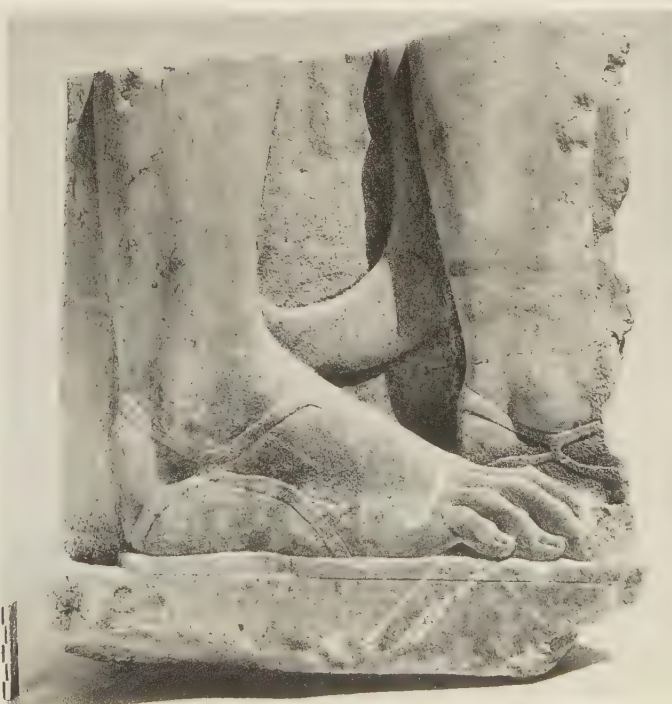


0 10 20 CM

d. Drawing of Athens N.M. 84



e. Pattern on Border of E



f. Fragment of Man-and-Dog Stele, E (S 1276a)



a. South Road from the East: Level of Classical Period.

A: Foundations of Houses on South Side; B: Bedding for Stone Aqueduct

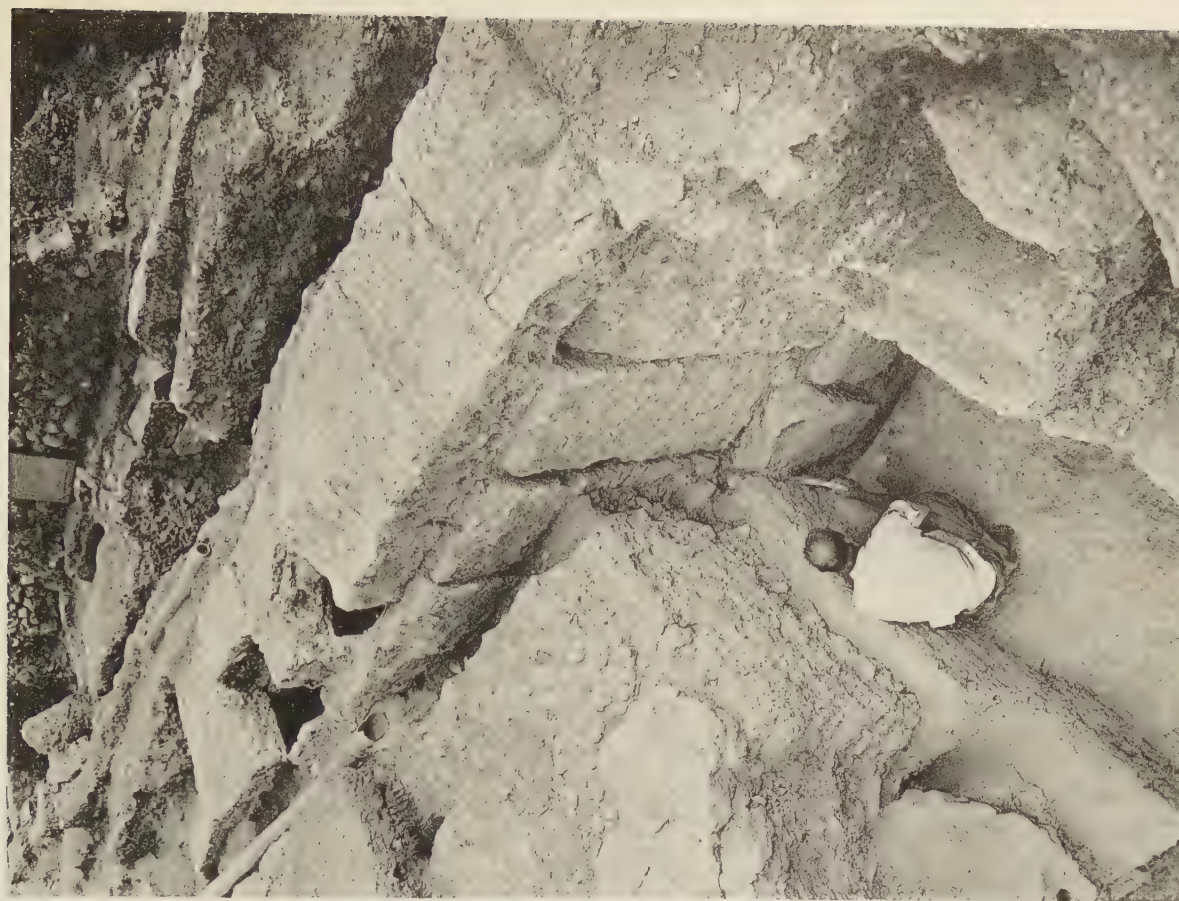


b. Section through South Road, from Northwest.

A: Bedrock; B: Level of Late Helladic Period; C: House of 6th century B.C.;
D: Archaic Water Pipe; E: Bedding for Stone Aqueduct; F: Road Surface of
5th century B.C.; G: South Foundation of Mint



a. Archaic Water Pipe



b. Stone Aqueduct (The workman rests on bedrock)

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



a. P 25261

b. P 25133

c. P 25174



d. P 25155

e. P 25077

f. P 25028



g. P 25252

h. P 25122

i. P 25087

Vases of the 1st to 6th centuries after Christ from Well Q 17:4

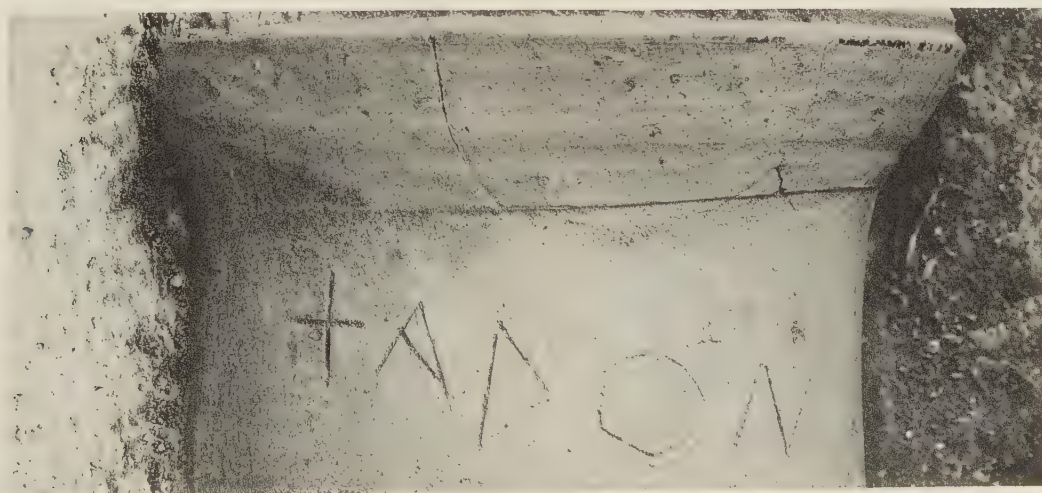
HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN ACROPOLIS 1955



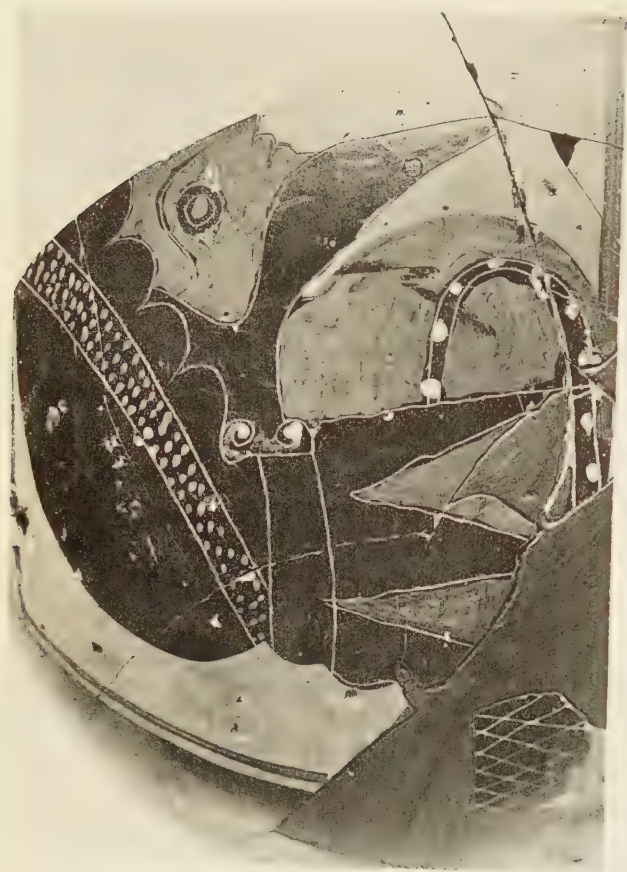
a. Lamps of the 1st to 5th centuries after Christ from Well Q 17:4 (L 5239, 5238, 5231, 5227)



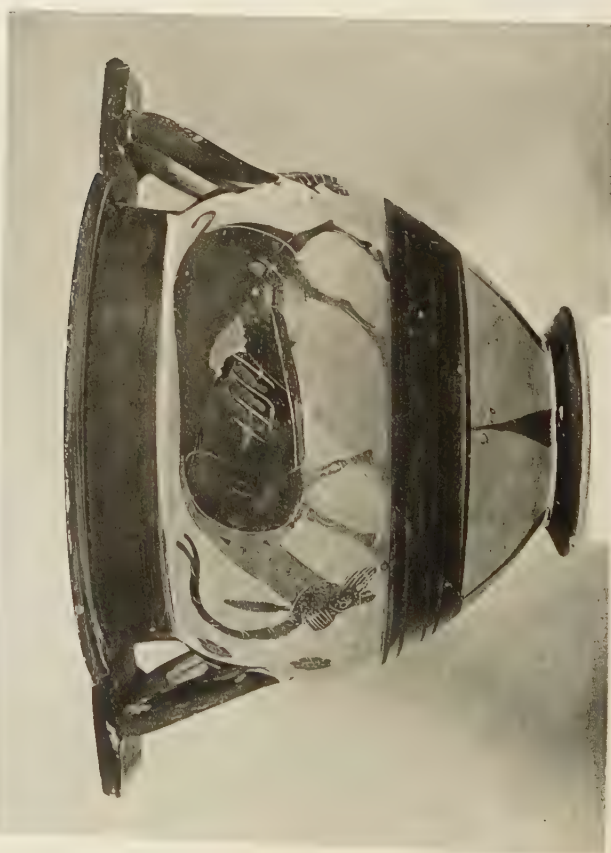
b. Bone Implements of the 2nd and 3rd centuries after Christ from Well Q 17:4 (BI 750, 748, 749)



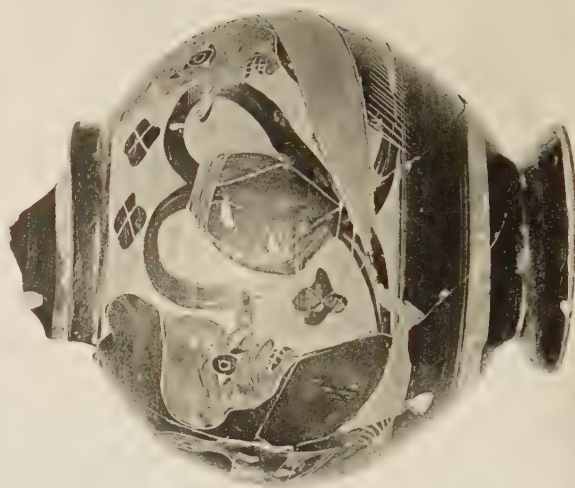
c. Inscription incised in Archaic Water Pipe



b. P 24944



a. P 24943



Vases from Well of Archaic Period under Terrace of Stoa of Attalos c. P 24945

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



a. P 24947



b. P 25007 and 25008

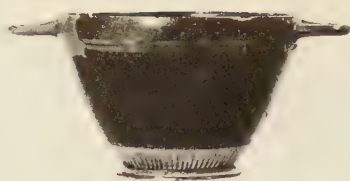


c. P 24946

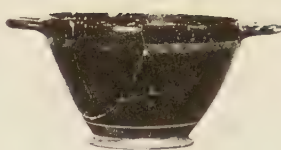


Vases from Well of Archaic Period under Terrace of Stoa of Attalos

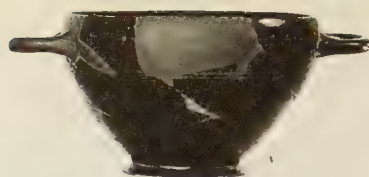
HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



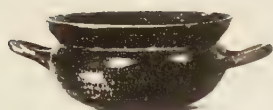
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b. P 24960



c. P 24964



d. P 24966



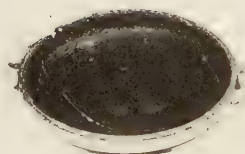
e. P 24973



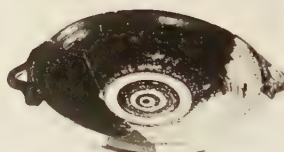
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g. P 24989



h. P 24981



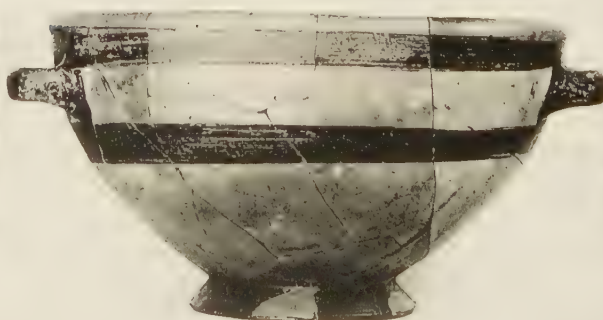
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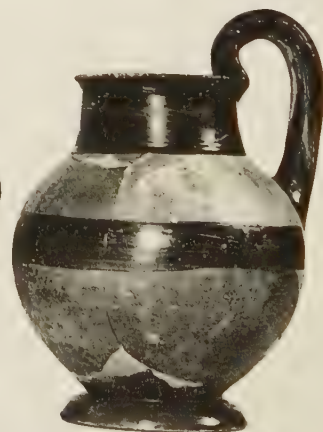
j. P 24988



k. P 24986

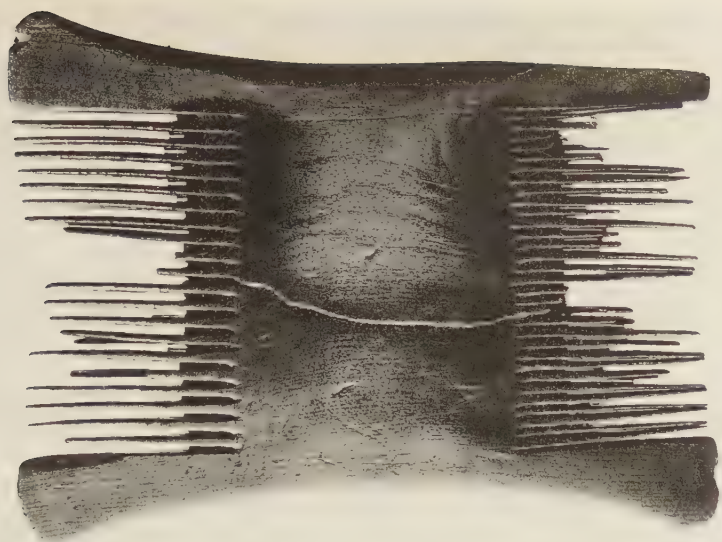


l. P 24984

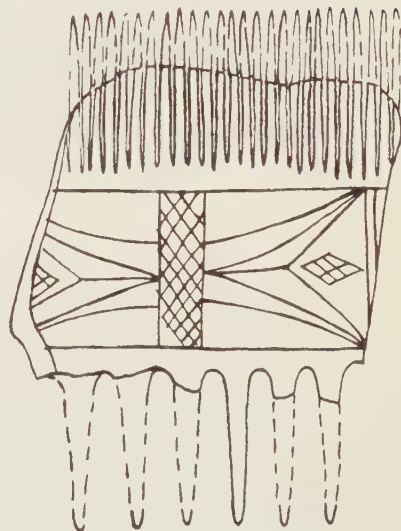
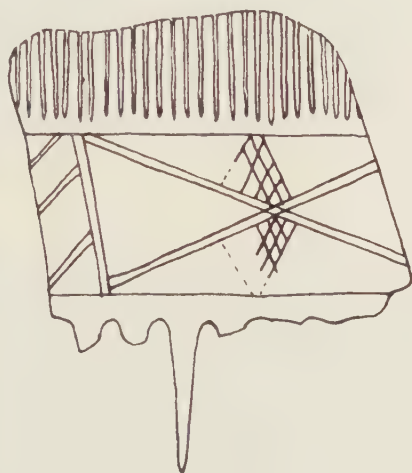


m. P 24987

Vases from Well of Archaic Period under Terrace of Stoa of Attalos
HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



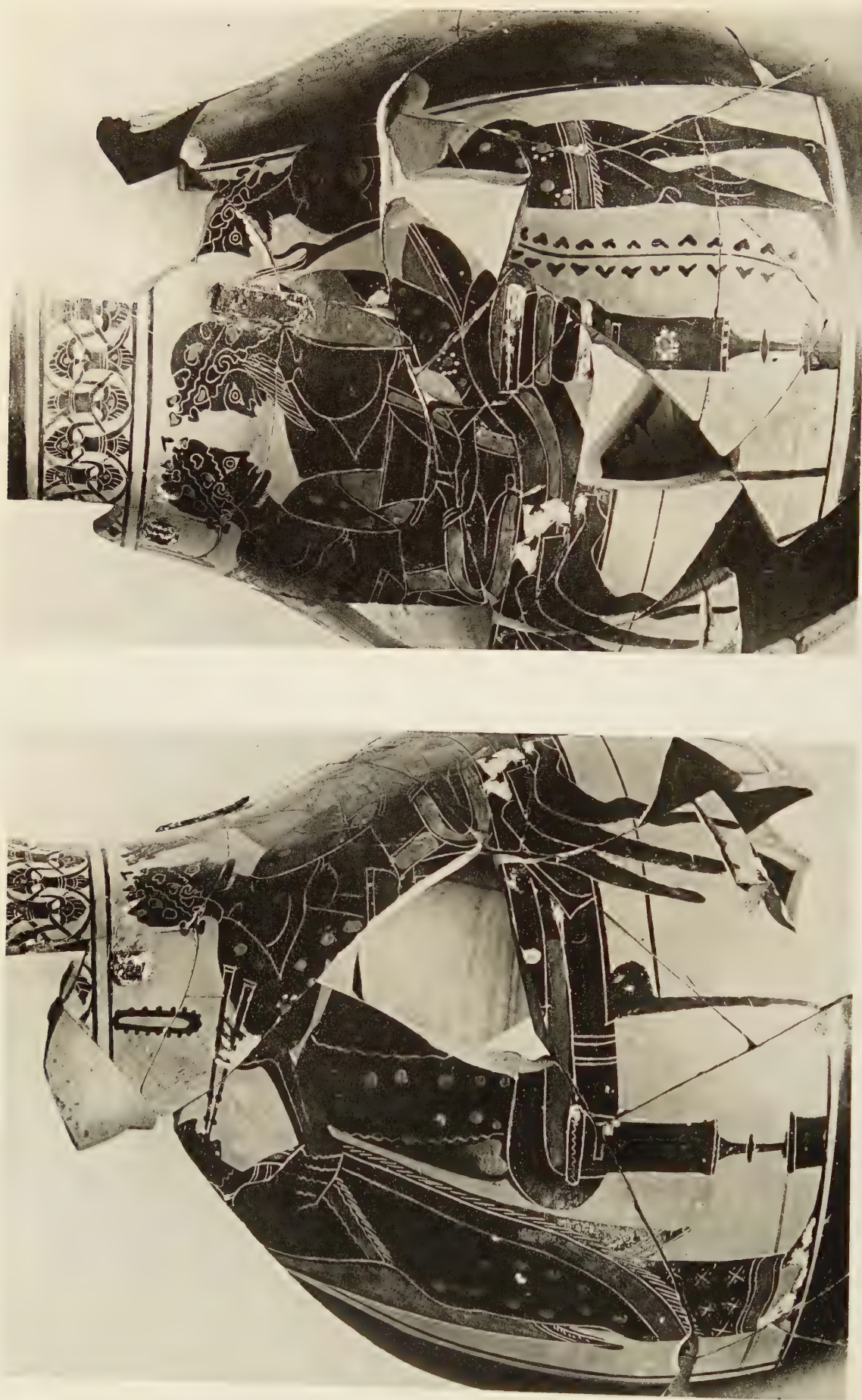
a. Wooden Comb (W 39) from Well of Archaic Period under Terrace of Stoa of Attalos



b. Wooden Comb (W 40) from Well of Archaic Period under Terrace of Stoa of Attalos



c-g. Vases from Well of Archaic Period under Stoa of Attalos, Shop II (P 24724, 25276, 25271, 25275, 24723)



Oinochoe by Amasis Painter (P 24673) from Well of Archaic Period under Stoa of Attalos, Shop III

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



a. P 24661



b. P 24677

Vases from Well of Archaic Period under Stoa of Attalos, Shop III

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



a. P 24679



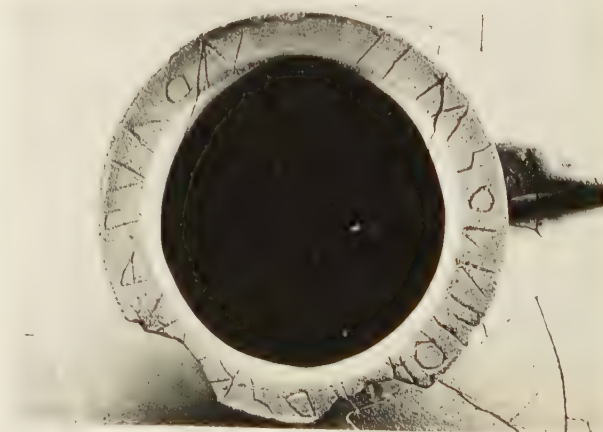
b. P 24667

c. P 24910

d. P 24912



e. P 24676



f. P 24910

Vases from Well of Archaic Period under Stoa of Attalos, Shop III
HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



Kolonos Agoraios after Landscaping (April 11, 1955)

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



a. Church of the Holy Apostles, from Northwest (June 6, 1955)



b. Church of the Holy Apostles: Forms for Domes of Narthex

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



a. Stoa of Attalos from Northwest (December 12, 1955)



b. Stoa of Attalos: Interior looking North (December 12, 1955)



a. Stoa of Attalos: Setting Doric Cornice



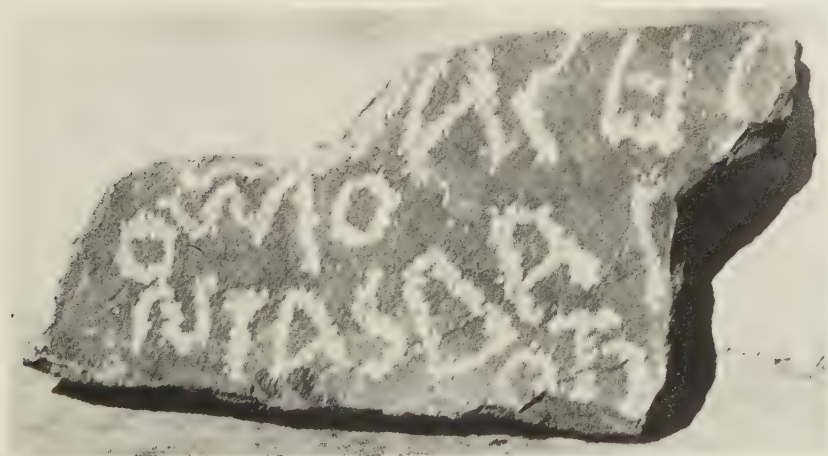
b. Stoa of Attalos: Fluting first Doric Column

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955

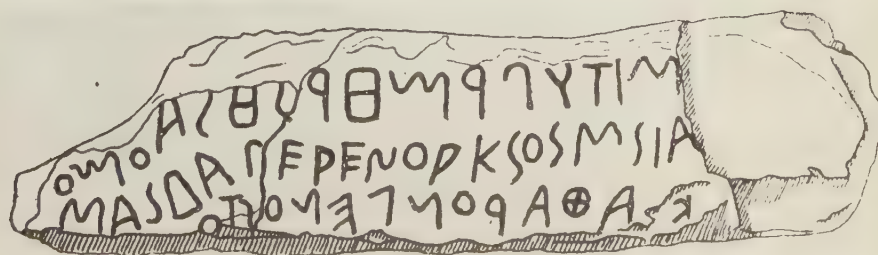


Stoa of Attalos: First Pergamene Columns erected

HOMER A. THOMPSON: ACTIVITIES IN THE ATHENIAN AGORA: 1955



a.



b.

WILLIAM A. McDONALD: NOTE ON A FRAGMENT OF AN ARCHAIC INSCRIPTION FROM DREROS



b-c. Corinthian Pyxis in New York
Courtesy of the Metropolitan Museum of Art



a. Corinthian Amphora in Corinth

D. A. AMYX: THE GELEDAKIS PAINTER



a-b. Corinthian Pyxis in Reading



c-d. Corinthian Pyxis in Munich

D. A. AMYX: THE GELEDAKIS PAINTER



a-c. Corinthian Vases from Apollonia (Albania)
D. A. AMYX: THE GELEDAKIS PAINTER

TREASURE-RECORDS FROM THE ATHENIAN AGORA

(PLATES 31–33)

THIS publication of the fragments of Attic Treasure-records found in the excavations in the Athenian Agora, copies of which have been kindly sent me from time to time by Professor Meritt, falls into three parts.¹ The first part comprises the various small pieces, hitherto unpublished, all of which, with the single exception of No. 5, appear to belong to types not represented among the finds of this class from the Acropolis; in the second part I re-examine, and suggest restorations for, a substantial fragment, obviously from an inventory of the treasures of Athena stored on the Acropolis, which Meritt has already published in *Hesperia*;² and in the third part I study another group to which substantial contributions have been made from the Agora.

We may accordingly attribute the contents of Part I, apart from No. 5, to sanctuaries situated in or near the Agora, though in no case is there convincing evidence for the identification of the building in which any of these sacred objects were preserved, or of the officials who drew up the inventories. That more than one sanctuary is represented is a reasonable inference from the variety of the objects recorded and from the difference in the formulae used for expressing the weights of these objects. Omitting doubtful instances we may contrast the use of ἔλκοσα, ἔλκων in Nos. 3 and 9d with σταθμόν – in No. 8 and σταθμόν ἄγει in No. 2A. To the possible implications of this difference I return later.³

For none of the unpublished pieces is it possible to establish with any degree of certainty the original length of line or the number of lines contained, and in the three instances where a suggested restoration is printed this is put forward with all reserve, as an indication of the minimum rather than actual length of line. I begin with the fragments in Attic script, which we may presumably date as earlier than 403/2 B.C.

¹ I am glad to take this opportunity of expressing my warmest thanks to Professor Meritt for inviting me to take a share in publishing here some of the epigraphical finds from the excavations in the Athenian Agora, and for his constant and much appreciated help, encouragement and patience during the fulfillment of my task. To Dr. Eugene Vanderpool I am deeply indebted for his help in securing the photographs to illustrate this article and in furnishing me with invaluable notes on dubious readings, as well as on the physical appearance of these fragments and on their finding places.

² XVII, 1948, p. 33 ff., no. 16.

³ P. 98.

As they are all engraved on Pentelic marble, it is unnecessary to state this for each item.

I

1 (Plate 31). Angle-piece, inscribed on face and right side, broken on all sides, found in late Roman context south of the central part of the Middle Stoa (L 14) on May 5, 1934.

Height, 0.11 m.; width (max.) of Face *A*, 0.10 m., of Face *B*, 0.06 m.; height of letters, *ca.* 0.008-0.009 m. (Horizontal unit, Face *A*, 0.012 m., Face *B*, 0.013 m.; vertical unit, Face *A*, 0.015 m., Face *B*, 0.011 m.)

Inv. No. I 1932.

	I :
	--- ελε//ι	:μ ---
	--- τευχα	ἀργ[υρ ---
	--- ζεσθ	μὸν [ἄγει ---
5	--- . . ερα	ΔΔΔ ---
	--- . . . ικ	ἀργ[υρ ---
		δεκ[α ---
		·††
		·Σ
10		· :

It is obvious that on Face *A* we have a portion not of an inventory but of a continuous document, presumably a decree, in view of the verb-form in line 4. In line 1 the partly preserved hasta, set to left of center, might equally well belong to K, N, Γ or P, but tells us nothing. The significant word is to be recognized in line 4, which it is tempting to restore as [λογί]ζεσθ|[αι(?)] and there can be little doubt that in line 3 τὲν χα[λκῆν] would be most appropriately preceded by τὲν στέλεν. This in turn points to [στ]έλει in line 2, for which the epithet λιθίνει offers a likely contrast to the stele of bronze in the following line. (It should be noted that the fourth letter of line 2 has been deliberately erased and left as a blank space). Here then is clearly an allusion to engraving something on a marble as well as on a bronze stele, preliminary to some act of reckoning (λογίζεσθαι), which would be most naturally undertaken by the Logistai; and the natural formula, supplied by a mid-fifth century decree from Eleusis,⁴ would be τοὺς δὲ λογιστὰς λογιζέσθαι, followed by the objects which they were to reckon up. In the restoration which I suggest as demanding the *minimum* number of letters to a line (25) it is assumed that gold objects and currency were mentioned first; and we might reasonably infer from the mention of silver items in what is clearly

⁴ *S.E.G.*, X, 24, lines 22-23 (*ca.* 450/49 B.C.) and cf. *I.G.*, I², 91, lines 7-8.

an inventory on Face *B* that instructions to reckon them up after the gold items followed on the missing lower portion of *A*.

----- ι . . (στ. 25)
 [. ἀναγράφσαι ἐν στ]έλε//ι
 [λιθίνει ^{παρὰ} _{πρὸς} τὲν στέλεν]τὲν χα
 [λκέν· τὸς δὲ λογιστὰς λογί]ζεςθ
 5 [αι τὰ μὲν χρυσᾶ καὶ τὸς στατ]ῆρα
 [ς τὸς τε Λαμψακενὸς καὶ Κυζ]ικ
 [ενὸς -----]

Some such restoration would account satisfactorily for the letters EPA at the end of line 5 and enable the IK in line 6 to fall into place in [Κυζ]ικ[ενὸς].

If these suggestions are on the right lines, we may compare also *I.G.*, I², 167, a fragmentary decree (with 36 letters to the line), which seems to include somewhat similar instructions, perhaps regarding sanctuaries on the Acropolis, but is too incomplete to permit of restoration in full.

The contents of Face *B*, apart from ἀργ[υρ - -] in lines 3 and 6, presumably [σταθ]|μὸν[ᾶγει] in lines 3-4, and δεκ[α - in line 7 are beyond recovery, and cannot be connected with any other of the fifth-century fragments published here.

2 (Plate 31). Angle-piece, inscribed on two adjoining faces, broken on all sides, found in late context northeast of the Tholos (H 11) on March 19, 1934.

Height, 0.112 m.; width of Face *A*, 0.057 m.; height of letters, *ca.* 0.007 m. (vertical unit, Face *A*, 0.0093 m.; Face *B*, 0.0117 m.). No punctuation.

Inv. No. I 1614.

	<i>A</i>		<i>B</i>
	[----- ᾶ]γει Δ		. --
	[----- κύλ]ιχς ᾶρ		Δ --
	[γυρᾶ --- ᾶγει]ι ΗΗΗΔ		
	----- Ηεκάτε		κο --
5	[ς -----] ι ι καρχέ		αα --
	[σιον ---- Η]ερμὸ στ		μο -- 5
	[αθμὸν ᾶγει --]ο χερων		ρα --
	[ίπτρο ---- ᾶρ]γυρᾶ στ		λι --
	[αθμὸν ᾶγει --] ι ι Προ		φι --
10	----- ιον ἀργ		σ --
	[υρὸν- σταθμὸν] ᾶγει ΗΔ		--
	----- οι ἀργυ		
	[ροῖ -----]		

Although several items may be restored with some confidence, the length of the lines of Face *A* can only be conjectured. If we may assume that the stele was engraved on all four sides, it is quite possible that there were two columns on each of the broader faces, or, alternately, that Face *A* was one of the narrower ones; in either case this would justify a restoration with quite short lines, as suggested here, giving us nineteen letters in lines 1-5 and eighteen in the remainder, where the spacing points to such a reduction. This would permit of the following text:

- [— — — — σταθμὸν ἄ]γει Δ
 [. . . Ἀγροτέρας (?) κύλ]ιχς ἄρ
 [γυρᾶ, σταθμὸν ἄγε]ι ΗΗΗΔ
 [Δ (?)·ἡάλυσις χρυσῆ] Ηεκάτε
 5 [ς, σταθμὸν ἄγει]† †· καρχέ
 [σιον ἄργυρὸν Η]ερμῶ, στ
 [αθμὸν ἄγει ΗΗ· τ]ὸ χερὸν
 [ίπτρο βάσις ἄρ]γυρᾶ, στ
 [αθμὸν ἄγει . . .]††· Προ
 10 [μεθέος καρχέσ]ιον ἄργ
 [υρὸν Ι, σταθμὸν] ἄγει ΗΔ·
 [Ηεκάτες (?) κότυλ]οι ἄργυ
 [ροῖ — — — — — — — —]

Line 2: Ἀγροτέρας seems a permissible conjecture here, since we have possibly an object dedicated to her in No. 9, below, followed, two lines later, by one dedicated to Hekate, as in line 4 here. In view of the regular formula σταθμὸν ἄγει appearing in lines 1, 6 (?), 8 and 11, we need not hesitate to complete it in line 3, where only the *iota* survives.

Line 5: After carrying over the final *sigma* of Ηεκάτε[ς], we have room only for the same weight-formula before the drachma-signs ††; and a weight of two drachmai only must belong to some small item of jewelry, presumably of gold, for which I suggest ἡάλυσις. This in turn involves carrying over one figure from the weight of the silver kylix in line 3, for which the Δ suggested is merely conjectural. In lines 5-6, καρχέ[σιον ἄργυρὸν Η]ερμῶ στ|αθμὸν—fits the shorter line of eighteen letters, leaving us with two spaces to fill with the weight, if we complete line 7 as [τ]ὸ χερὸν|[ίπτρο], for which there is no obvious alternative. The natural restoration of these two figures for the weight is ΗΗ, since we have two other καρχέσια of precisely this weight among the dedications on the Acropolis.⁵

⁵ Both were added to the Hekatompedon-treasures in 428/7 B.C., *I.G.*, I², 262, lines 47 f.; cf. I², 263-275. The second of these, dedicated to Zeus Polieus, re-appears in later lists, at any rate down to 390/89 B.C., as weighing 199 drachmai; cf. *I.G.*, II², 1382, lines 12-13 (405/4 B.C.); II²,

Lines 7-8: [βάσις ἀρ]γυρᾶ appears to be the only possible restoration to fit the proposed length of line and also account for the preceding genitive as well as the gender of ἀργυρᾶ, and there is no real reason to distrust it as being an unfamiliar alternative to ὑπόστατον, which is out of the question here. For its weight it is not clear whether we should assume that three or four weight-signs are missing from before the surviving Η, since these are set slightly to the left of their expected positions in a stoichedon arrangement relative to the line above, as though the engraver had possibly used a wider spacing for the weight-signs. In any case we have no clue to the missing figures, though we may safely admit that the *minimum* weight ΗΗΗ would be impossibly low for an object of this nature, and that the first figure may well have been Η or even Π.⁶

Lines 9-11: There is no obvious solution to the problem presented by the surviving letters in these lines, Προ — — — — — ιον ἀργ[υρῶν], which is presumably the description of a single item weighing ΗΔ (110, or more, drachmai). If the first three letters form the beginning of the name of the deity or Hero to whom it belonged, the only possible restoration will be Προ[μεθέος]ιον ἀργ[υρῶν]; the missing word should perhaps be completed as [καρχέσι]ον, as in lines 5-6 above, in spite of the weight being markedly less than that (ΗΗ) suggested for the Karchesion of Hermes. If I am right, the cup was the property of Prometheus, whose cult, combined with that of Hephaistos, was located near the Academy.⁷ We do not know of any building except an altar dedicated to him there, but there seems no reason why votive offerings of precious metal should not have been made to him and preserved in some other building. Alternative restorations, such as προ[τομέ — —], πρό[σοπον — —] or πρό[σκειται — —] seem to have less to recommend them than the first suggestion, which is adopted in the text printed above.

Line 12: [κότυλ]οι ἀργυ[ροῖ], preceded by the name of a deity, seems a reasonable conjecture, and the insertion of Ηεκάτες would exactly fill the line, though Ηερμῶ preceded by two more weight-signs carried over from line 11 would be equally suitable.

Face B, with a rather larger vertical unit (0.0117 m.) and slightly larger letters, seems nevertheless to be engraved by the same hand as A, which might be styled

1400, lines 22-23 (390/89 B.C.). But in II², 1388A, line 48 f., (398/7 B.C.) the weight is given as 198 drachmai; cf. *J.H.S.*, LI, 1931, pp. 139 ff. for a new fragment of this stele, which makes this weight certain.

⁶ No χε(ι)ρόνιπτρον is recorded among Attic votive-offerings in the fifth century, and I know of only two instances in fourth-century lists: *I.G.*, II², 1416, line 7 (= *C.I.G.*, 161, copied by Fourmont only), where the accepted reading in this fragment of a Chalkotheke-inventory is σφαγεία καὶ χερό[νιπτρα], and II², 1469B, lines 91-92, [χειρ]όνιπτρον κατεα[γός]. Cf. also the (bronze) ὑπόστατον λοτηρίο, *ibid.*, 1425B, line 371.

⁷ Pausanias, I, 30, 2, with Frazer's commentary; Judeich, *Topographie*², p. 413, gives further references; and cf. *I.G.*, I², 84, lines 34, 37 for the ritual procession at the Prometheia.

“semi-italic,” and shows a distinct resemblance to that of *I.G.*, II², 1686 (Pl. 33), which is in Ionic script.⁸ Little can be made of the scanty remains on this face; perhaps κó[τυλοι] again in line 3; for line 5 we have a choice of [Ἡερ]μῶ or [σταθ]μó[ν], for line 6, perhaps [ἀργυ]ρᾶ, for line 7 [χα]λκ- (rather than [ἡέ]λκ[ον], *vel sim.* in view of σταθμὸν ἄγει on Face A), and in line 8 φι[άλε (or -άλαι)]. There is, of course, no indication of the length of these lines.

3 (Plate 31). Fragment broken on all sides, but text complete below, found in late context in Tholos wall trench at the north (G 11) on February 26, 1934.

Height, 0.115 m.; width, 0.12 m.; height of letters, 0.008-0.010 m. (O is smaller) (vertical unit 0.0104 m.; horizontal, 0.0108 m.).

Inv. I 1405.

[----- ἀργυ]ρὸν ἔ[λκον -----]
 [----- ον ἔ]λκον ἢ -----
 ----- οἱ στατῆρε[ς -----]
 [(?) ἀργύριον] ἄσεμον ἐκ τῷ Π[αρθενῶνος (?) -----]
 5 [----- περ]ικαρδίου ϜΔ -----
 [ἔλκον(?)] -Δ††††† ἀργυρ[ὶς (?) -----]
 ----- ς ἔλκοσα ϜΗΗ† -----
 (vacat)

Here we have no definite clue to the length of the lines, for, if we restore in line 4 [ἀργύριον] ἄσεμον ἐκ τῷ Π[αρθενῶνος] it is clear that several words must be missing in the space between this entry and the ending of the next, [--- περ]ικαρδίου ϜΔ, 60 being presumably a number, not a weight. This must form the end of the description of some object with pendants (?) “round the heart,” possibly a votive ἀπόδεσμος or στρόφιον.⁹ As no parallel appears to be known for the use of the epithet in this sense, we must be content to recall the presence of an [ἀπόδ]εσμος ἐκ τῷ ἀρχα[ίῳ νεό] listed among the votives in the Braurion in the fifth century.¹⁰ To give an indication of the approximate length of the lines, which can hardly have contained less than sixty letters, we might restore this passage as follows: [--- (?) ἀργύριον] ἄσεμον ἐκ τῷ Π[αρθενῶνος] --- ἀπόδεσμος χρυσῶς, ἀριθμὸς τῶν χρυσίων τὸν περ]ικαρδίου ϜΔ ---.

Even less can be made of the other lines: in line 2 the weight of one drachma and one (or more) obol could only suit a ring or light bracelet, enabling us to restore [δακτύλιον (or χλιδόμιον) χρυσὸν (?) ἔ]λκον ἢ; for line 3 I would suggest [Αἰγυαῖ]οι

⁸ Cf. the photographs of newly-found fragments of this stele, *Hesperia*, XI, 1942, pp. 275 ff., no. 52.

⁹ For these and similar items of feminine adornment cf. Pollux, *Onom.*, VII, 65-68.

¹⁰ *I.G.*, I², 386A, I, line 12; cf. Hondius, *Novae Inscriptiones Atticae*, pp. 62 ff., pl. IV. Three other objects in the same list (lines 5, 10-11, 12-13) are followed by the words ἀριθμὸς τῶν χρυσίων, but the number is only preserved for the second of them, namely 68.

στατῆρε[ς] rather than *e. g.* Κυζικηνοί, in view of the probability that silver staters are more likely to be recorded here in close proximity to the uncoined silver from the Parthenon, if rightly restored.

In line 6, perhaps ἀργυρ[ίς], since we find another example of a cup of this description in No. 9*d*, below, followed no doubt by ἑλκοσα —; and in line 7 the fairly certain remains of a *sigma* before the same participle might point to another cup of this type, were it not that the weight of 700(+) drachmai would be unusually heavy for it. In fact this would be more appropriate as the weight of a hydria, which would require us to explain the *sigma* as either the ending of a possessive genitive or a compound adjective such as ἐπίχρυσος.¹¹

The style of the lettering indicates a date towards the end of the fifth century, an impression which is confirmed by the spelling of ἑλκοσα without an aspirate; but this need not imply that it must be dated later than the two other fifth-century documents in which it is written with the aspirate, namely *I.G.*, I², 301, line 60 (dated by Ferguson, correctly, I believe, to 409/8 B.C.)¹² and I², 313, line 54 (the Eleusis-accounts of 408/7 B.C.). Seeing the fragmentary condition of our text, it would be unwise to draw any such conclusion on the evidence of this participle alone. There is, however, the other valuable indication of an approximate date afforded by the mention of uncoined metal, presumably silver, from the Parthenon (line 4). This points to a transaction similar to those recorded in *I.G.*, I², 301, line 13 and II², 1686*A*, lines 7 and 14 (405/4 B.C.), and appears further to confirm Ferguson's conclusion that during the last few years before the fall of Athens the precious metals in the sanctuaries were "raided" for purposes of coinage on several occasions.¹³

4 (Plate 31). Fragment broken on all sides, but text complete below, found in late context in the Square to the south of the New Bouleuterion (F 10) on March 28, 1934.

Height, 0.09 m.; width, 0.051 m.; letters and spacing resemble those of No. 3.

Inv. I 1709.

In spite of the general resemblance of Nos. 3 and 4 and the fact that both pieces have a blank space below, it is quite impossible to combine them into a continuous text owing to the different nature of their contents.¹⁴ If in fact they belong to the same stele, they cannot be ascribed to the same year's accounts, as is further confirmed by the punctuation (:) in No. 4 which is not found in No. 3.

¹¹ Actually there are no hydriai recorded among Attic votive-offerings in *I.G.*, I²; in fourth-century lists the most usual weight of silver hydriai ranges between 980 and 1000 drachmai.

¹² *The Treasurers of Athena*, pp. 16 ff.

¹³ *Op. cit.*, pp. 24, 37 (note 1), 164.

¹⁴ Meritt and Vanderpool agree that the lettering and spacing exactly resemble those of No. 3; but the *rho* of No. 4 has in each case a much larger loop than in No. 3.

!
 σ τ ο ||
 τ α Π α ν σ —
 Φ ο ρ υ σ — —
 5 ο ς ἐ γ [ρ α μ μ ά τ ε υ ε
 ᾠ ρ γ υ [ρ — —
 ν : Χ Χ — — —
 (vacat)

Line 1: We have merely the remains of a centrally-placed *hasta* (I, T or Y).

Line 2: After *στο* apparently || (= 2 obols), for which I can only suggest [ἀργυρίο ἐχσαγί]στο || or [Ἡεφαί]στο ||. The former word, if correctly restored, has not previously been found in Attic documents of the fifth century, but occurs more than once in fourth-century Treasure-records.¹⁵ The alternative, that we have two unidentifiable objects, the property of Hephaistos, is rather less acceptable.

Lines 3 and 4: We have clearly the remains of two proper names. The letters TA preceding the former are most likely to be from the end of the word [ἐπιστά]τα, indicating that we have the names of two officials bearing this title, followed, after an interval of uncertain length, by the words [hoῖς — —]ος ἐγ[ραμμάτευε]. For the names, Πανσ[ανίας] is one of many obvious alternatives,¹⁶ and in line 4 we may choose between Φόρυς, Φορυσκίδης and Φορύσκος (for none of which is there a fifth-century example).¹⁷ If, however, we attempt a restoration in which the names of the two Epistatai are followed by that of the Secretary, we see that this gives us lines with much fewer than the sixty letters suggested as the approximate length of line in No. 3. Rather than abandon the presumed connection between the two fragments, we may suggest that Φορύσκος (if that was his name) was not a colleague of Paus-, but a member of a separate board which received from Paus- and his unknown colleague the objects mentioned in the last two lines, and had — — os as Secretary. Whether the second board was styled Epistatai, Tamiai, or had some other title we have no means of telling, but some such wording would give us a length of line approaching more nearly to that desired.

The contents of the last two lines are beyond recovery, except for the mention of some object, or quantity, of silver in line 6; and the weight of 2000 (or more) drachmai in line 7 might possibly be the weight of a thymiaterion, since no other type of vessel is likely to have weighed so much; but it is far more likely to represent a sum of uncoined silver, rather than gold. In any case the letter N which precedes the weight should probably be restored as ending the word [ἔλκο]ν.

¹⁵ See the note on ἐξάμιστος, p. 100, below.

¹⁶ Kirchner, *P.A.*, nos. 11706-11745.

¹⁷ *Ibid.*, nos. 14964-14969.

In view of the many uncertainties involved, it is not worth attempting to offer a restored text of this fragment.

5 (Plate 31). Fragment broken on all sides except the left, where part of the edge is preserved, dressed with a toothed chisel. Found in late Roman context on the northeast slope of the Areopagus (Q 23) on April 15, 1939.

Height, 0.057 m.; width, 0.072 m.; thickness, 0.087 m.; letters 0.01 m., stoichedon (vertical unit 0.013 m.).

Inv. I 5765.

O:I
X P
N T O
Δ Δ Λ:K

This fragment by itself would be of little interest, but fortunately it proves to belong to the stele, represented by several fragments, on which were recorded the Treasures of Artemis Brauronia, towards the end of the fifth century.¹⁸ It comes from the left-hand edge of the reverse face of *I.G.*, I², 387 (Hondius, *Nov. Inscr. Att.*, pp. 62 ff., no. XB) at a point where the right-hand edge is preserved. This enables us to read:

[-----στ]αθμὸν τούτον:||||:κνά[θ]
ο:| |:χρυσὸ(?)-----σταθμ]ὸν τούτον:Π:δακτύλιο.
χρ[υσο.-----]α μικρὰ καὶ μέν, σταθμὸ
ν το[ύτον:--:-----δι]άλιθον χρυσία ἔχον:ΗΠ^Δ
10 ΔΔΔ:κ-----ι ἀπὸ τοῦ χιτονίου:||||:

We thus learn that the *κνάθοι* numbered two; that the ring in line 7 was of gold (unless we should read δακτύλιο[ι] χρ[υσοῖ]—, of uncertain number); and that the *διάλιθον*, whether this be noun or epithet, had no less than 180 gold pieces attached. Unfortunately it sheds no light on the object(s) accompanying the golden crescent (*μῆν*) in line 8, and affords nowhere any clue to the exact width of the stele. It should be emphasised that the line-length of forty-six letters conjectured by Hondius is far from certain.

This is not the occasion to discuss in detail the restorations on which his conjecture was based, but we may profitably observe that in *I.G.*, I², 386 (Hondius, *loc. cit.*, A), lines 2-4, his assumption that objects described as ἀπὸ τοῦ λιθίνου (or τοῦ ἀρχαίου) *ἡέδος* were garments is far from convincing, in spite of the fact that in the fourth-century inventories of the Brauronia this was certainly the case. To judge by the remains of line 2, and the contents of lines 5-14, this portion of the list contains items

¹⁸ I had established this connection before seeing that Raubitschek had also discovered it (*S.E.G.*, X, 219).

of jewelry, into which his inserted restoration of *χιτονίσκος κτενοτὸς ποικίλος* in line 7 seems very dubious. Similarly, his proposed reading in the fragment to which our new piece belongs, namely [*φιάλε ἀργυρ*] *ἀ μικρὰ καὶ μέν* (line 8), offers an improbable conjunction of objects. Moreover, in B, line 12 for his conjecture [*ἐκ τῷ ἀρχαίῳ νεὸ παρέδοκεν ἡ ἐπιερέ*] *α ταῖς ἐπιερέαις: ΔΙΙ:* I should prefer to restore [*— ταῦτα ἐστὶν παρ*] *α ταῖς ἐπιερέαις: ΔΙΙ:*.

In the circumstances we must be content, I feel, to admit that the lines of this stele may well have contained more, rather than less, than forty-six letters, to which conclusion the thickness of the stele (0.11 m.) lends some support. This uncertainty furnishes a grave obstacle to any attempt to reconstruct the whole stele from the fragments that have survived—a task which I had once hoped to undertake in conjunction with the publication of the text preserved on the back of *I.G.*, I², 292a. Meanwhile it may be worth recording that the obverse face of the stele, which is recognizable by its smoother surface, is composed of *I.G.*, I², 386 (Hondius, *loc. cit.*, A); 291, broken on all sides; the contents of 292b, complete on left; together with, possibly, 292. The foot of the stele is supplied by I², 386, II (Hondius, *op. cit.*, no. XI) which, moreover, preserves the left margin for its whole height, though apparently three letters are missing owing to injury from the beginning of lines 2-6, and two from lines 7 and 8.¹⁹ The fact that this is complete below, with a wide blank space below the last line, and that the tooling on the edge is less carefully done than on the other two pieces on which it appears, together with slight differences observable in the lettering, justify the conclusion that this belongs to the inventory of a later year than that of the other fragments.²⁰

6 (Plate 31). Fragment broken on all sides, found in mixed late Roman to Dark Age context northeast of the Odeion (N 8) on March 31, 1936.

Height, 0.075 m.; width, 0.105 m.; thickness, 0.086 m.; height of letters, 0.009 m.; stoichedon (horizontal unit, 0.014 m.; vertical, 0.012 m.).

Inv. No. I 3943.

[— χ] *αλκε.ι. —*
 — — — *ς Λακον —*
 — — — *ΔΙ: λυρ —*

The firm and well-spaced lettering is not very like that of any other of the fifth-century fragments here published, and the contents, as far as they can be recognized, are not traceable elsewhere.²¹

¹⁹ Hondius' restoration unfortunately ignores this important fact.

²⁰ These observations are made by Ferguson (*op. cit.*, pp. 62 ff.) in his discussion of this stele, and supplemented by information furnished to him by B. H. Hill.

²¹ Raubitschek (*op. cit.*) attributes this, as well as No. 5, to the inventories of the Brauronion, but Vanderpool, after careful examination at my request, reports that this is unlikely.

Line 1: In spite of damage to the upper edge, the last three signs can hardly be anything but the remains of :|: , i. e. a single bronze object, of uncertain nature.

Line 2 gives us a particularly intriguing entry: in view of line 1 this might most naturally be taken as referring to one or more bronze objects of Laconian workmanship, but for the fact that we have no items described as Laconian among Attic fifth-century inventories. On the other hand they appear frequently among those of the fourth century, both in the Chalkotheke and elsewhere.²² In the circumstances, we must consider various possible restorations:

(1) that we should restore [ἀσπίδε]ς Λακον[ικαί – –] and regard these shields as identical with those brought by the victors from Sphakteria in 425 B.C. and dedicated in the Stoa Poikile, where Pausanias saw them nearly six centuries later.²³ If so, our fragment would belong to an inventory of objects dedicated in the Stoa and drawn up within twenty years, at most, after the erection of the shields. This conjecture, however attractive at first sight, is not supported by any external evidence to show that other votive objects were preserved there, and there is no clue to the place where the contents of our list were kept.

(2) There is the obvious alternative that the reference is to some Laconian bronze vessels of no historic importance, such as those mentioned in the note.

(3) An entirely different interpretation of the surviving letters would be obtained by restoring [– – ἡδ]ς (or [ἡδ]ς) Λάκων [ἀνέθεκε]. In this case we might be tempted to identify this entry with “the false staters sealed in a box by Lakon,” which occur in Hekatompedon-lists from 398/7 B.C. onwards (*I.G.*, II², 1388B, lines 61-62, στατήρες κίβδηλοι [ἐν κιβωτίῳ σεσημασ]μένοι οἱ παρὰ Λάκωνος); cf. II², 1400, line 57; 1401, lines 44-45; 1407, line 43 (restored); and 1415, lines 19-20, where the order of the words is different.²⁴ As these staters appear in a long list under the rubric Τάδε ἄγραφα παρέδωσαν καὶ ἄστατα ἐπέτεια (which is left unaltered in the list of eight years later, II², 1400, line 57), they might well have been transferred to the Hekatompedon from

²² Among the contents of the Chalkotheke appended to the inventory drawn up by the Tamiai of Athena for 368/7 B.C. (*I.G.*, II², 1425, line 397) we find ἀσπίδες Λακωνικαὶ ΠΗ (not ΧΠ as printed in the *Corpus*), and in line 406 κρατῆρες Λακωνικοὶ ΙΙΙΙ (wrongly printed as ΙΙΙ). The shields re-appear, presumably, in II², 1426, line 17, where Kirchner restores [ἀσπ]ίδες Λ[ακωνικαὶ –]. At Eleusis, ca. 330 B.C., we find a ὑδρία Λακωνική (II², 1544, line 59) and a Laconian lebes (*ibid.*, line 65), as well as some unidentifiable Laconian vessels (?) (*ibid.*, line 60). Laconian kylikes appear in the *Tabulae Amphictyonum*, II², 1643, lines 1-2 and 5-6 (sixteen of which weigh 708 drachmai).

²³ I, 15, 4; for the single surviving shield found in the Agora cf. *Hesperia*, VII, 1937, pp. 347 f., figs. 10-11; *A.J.A.*, XL, 1936, pp. 189 ff.; *J.H.S.*, LVI, 1936, p. 138; LVII, 1937, p. 159.

²⁴ It should be noted that Kirchner does not include this Lakon (a metic?) in *P.A.* The name Λάκων which he cites from the Erechtheid tomb-stone of 459/8 B.C. (*I.G.*, I², 929, line 91) is now restored as [Β]άκων (cf. Tod, *G.H.I.*, 26), and the only other Λάκων in *P.A.* (8975) belongs to the second century B.C.

some other sanctuary at the beginning of the fourth century, as were, for instance, the thirty-five false staters from Eleusis (II², 1388B, lines 53-54), to which I refer elsewhere. It would be natural to assume that Lakon not only sealed the box but dedicated it also; and on this view we might reasonably restore [στατῆρες κίβδελοι ἐγκιβοτίοι σεσεμασμένοι ἡδ]ς Λάκον [ἀνέθεκε]. But this would still leave us uncertain as to the place where this item was kept in the fifth century.

Line 3: I assume that the first two signs were ΔΙ (eleven, or more, unknown objects), followed by λύρ[αι —]. Whether they were specified as ἐλεφάντιναι, as were some of the lyres found in the Parthenon-lists of the fifth century (*I.G.*, I², 276, etc.) must remain uncertain. It is reasonably certain that this word must be restored as λύρ[αι], although the downward curve of the loop of the *rho* is not preserved owing to surface injury; in fact the surviving traces might equally well belong to Ε or Π.²⁵

7 (Plate 32). Small fragment with right-hand edge complete; the side is un-inscribed, but returns at an angle of *ca.* 70°, and at least two line-spaces are vacant below line 4 on the face. Found built into a modern floor, in the area of the Southwest Fountain House (50 meters S. E. of Tholos) on March 6, 1934.

Height, 0.10 m.; width, 0.041 m.; height of letters, 0.011 m., but O is *ca.* 0.007 m. (vertical unit, 0.015 m., horizontal, 0.01 m.).

Inv. I 1528.

Σ
—Ι
ΛΥ
ΛΟΙ

The deep-cut letters, with their close horizontal, and much more generous vertical spacing, are quite distinct from those of any other of our fragments; and the curious angle at which the right-hand side returns, as if to fit some angular recess, is no less distinctive. I include it among the pre-Euklidian pieces, though it is just possible that the Λ in line 3 might be a *lambda*, not *gamma*.

The first letter in line 4 can only have been Μ, which suggests the restoration [ἀσπίδες ἐπίσσε]μοι —.²⁶

8 (Plate 32). Fragment from the lower left-hand corner of a stele, with left margin preserved and vacant space below, found in modern house wall east of the Southwest Fountain House (I-J 15) on February 11, 1953.

²⁵ This is the impression conveyed by the photograph, which Vanderpool confirms; but neither λνε nor λνπ points to a possible reading here, and it is worth noting that the *hasta* is set distinctly to the right of the first stroke of the *nu* in the line above, indicating a narrower letter than Ε or Π.

²⁶ (Meritt's original reading, confirmed by Vanderpool.) Cf. ἀσπίδες ἐπίσσεμοι ΠΙ in the Parthenon-lists (*I.G.*, I², 276, line 14, etc.), in some of which the number is wrongly restored as ΠΙ.

Height, 0.19 m.; width, 0.22 m.; height of letters, 0.01 m., non-stoichedon.

Inv. I 6564.

·ΙΟΙ
 Ὑγίει(α) [ς -----]
 σταθμόν Η[----- στατήρες Θη]
 σέος ΗΗΔΠ -----
 Σ Σ Σ Σ
 5 στατήρες ΠΗ -----
 Σ Σ
 (vacat)

It is impossible to connect this with any other of the fragments from the Agora, or with any of the Acropolis-inventories or records of payment. It is not easy to suggest a probable date, in view of the inconsistency between the Ionic *gamma* in line 2, as well as the *eta* in line 5, and the genitive ending in *-έος* in line 4. Whilst the former feature might point to the gradual encroachment of Ionic forms before the standardization of the Ionic alphabet, the untidy lettering might indicate a date after 403/2, with the genitive in *-έος* as an unusual survival. If we ignore the style of the lettering and consider only the contents, we might well wonder whether the sums of staters recorded in lines 4 and 5 could still have remained intact after the downfall of Athens.

Line 1: The first *hasta* is unlikely to be an *iota* as the *Ο* following it is not placed centrally between it and the third letter, which I take to be *iota*, but set rather to the left, indicating a *rho*; and *-ροι* (rather than *-γoui* or *-πoui*) seems the natural choice, giving us [*-ῥρν*]*ροι*.

Line 2: I have no hesitation in reading Ὑγίει(α) [ς -] and assuming that the cross-bar of the *alpha* was omitted by oversight. But an object dedicated to Hygieia, whether to the goddess herself or in association with Asklepios cannot, I believe, be paralleled in any Attic inventory, and the few dedications to her on votive stelai or statue-bases are, with one exception, not earlier than the last quarter of the third century B.C.²⁷ That there could be any connection between this entry and the famous statue of Athena Hygieia which stood just inside the Propylaea seems most unlikely.²⁸

Line 3: There are traces of the first figure after *σταθμόν*, pointing clearly to *Η*, but the full weight and the object to which it refers are unknown.

²⁷ *I.G.*, II², 4417, found at the Kerameikos, a statue-base to Asklepios and Hygieia, is dated "s. IV a."; 4441, to Amphiaraos and Hygieia is dated *ca.* 217/6 B.C.; 4456, 4457, 4458, 4460 and 4465 ff. are later still. The earliest recorded dedication to Asklepios among the Acropolis-treasures, a massive silver basket, appears in II², 1474B, lines 8-10 (not before 318/7 B.C.). For the earliest dedications in the Asklepion, II², 1532 ff., going back to 346/5 B.C. at latest, cf. also Meritt-Pritchett, *Chronology of Hellenistic Athens*, pp. 32 ff.

²⁸ *I.G.*, I², 395; cf. Raubitschek, *Dedications*, no. 166, with full bibliography.

Line 4: There can be little doubt that $-\sigma\epsilon\omicron\varsigma$ is to be interpreted as $-\sigma\epsilon\omega\varsigma$, the genitive of a third-declension noun ending in $-\sigma\epsilon\acute{\upsilon}\varsigma$, and to complete it as $[\Theta\eta]\sigma\acute{\epsilon}\omicron\varsigma$ seems almost equally certain. Little importance need be attached to the fact that in line 5 there is no possessive genitive between the word $\sigma\tau\alpha\tau\acute{\eta}\rho\epsilon\varsigma$ and the amount recorded (600 staters, at least). Unfortunately we have no clue to the origin of these staters or of the 215 (+) staters of Theseus in the line above, but Kyzikos is a reasonable guess, in view of the transactions in staters of that mint recorded in the last few lines of *I.G.*, I², 305, the accounts of the *Tamiai* for 406/5 B.C. Whether this fragment is the sole survivor of inventories of the contents of the sanctuary of Theseus is a question to which no answer can be given with confidence, but in any case we have independent evidence for the sacred possessions of Theseus including a considerable amount of currency.²⁹ Thus in *I.G.*, I², 310, in the inventory of the Treasures of the "Other Gods," we find three entries relating to him (lines 156 f., 4270 drachmai; line 215, (?) drachmai; line 275, 50(+) drachmai); and in the record of the *Logistai*, *I.G.*, I², 324, line 89 (*S.E.G.*, X, 227, line 84) is a loan from his funds, restored as 808 drachmai, $4\frac{1}{2}$ obols.

9 (Plate 32). Four fragments, apparently from the same stele, broken on all sides, of which the dimensions may be conveniently shown in tabular form as follows:

	Height	Width	Height of letters	Unit, vertical	Unit, horizontal
<i>a</i>	0.176 m.	0.036 m.	ca. 0.01 m.	0.0153 m.	0.0125 m.
<i>b</i>	0.116 m.	0.058 m.	ca. 0.01 m.	0.0155 m.	0.011 m.
<i>c</i>	0.08 m.	0.09 m.	ca. 0.01 m.	0.0155 m.	0.011 m.
<i>d</i>	0.12 m.	<i>A</i> 0.085 m.	ca. 0.009 m.	0.01457 m.	0.008 m.
		<i>B</i> 0.045 m.	0.006-0.007 m.	0.0086 m.	0.0093 m.

Inv. I 1495 *a*, *b*, *c*, *d*.

These were all found in the vicinity of the Tholos: *a* in late context immediately north of it (G 11) on March 9, 1934; *b* and *c* in late context ca. 25 meters west of it (F 10) on April 2, 1934; *d* in marble pile just north of it. A fifth fragment, found in the same region, also inscribed, like *d*, on two adjoining faces, may possibly belong to this stele,³⁰ but as this is by no means certain I prefer to number it separately (No. 10, below).

As the photographs show clearly, the lettering on *a*, *b*, *c* and *d*, Face *A* would seem to be uniformly the work of one engraver, whilst that on *d*, Face *B* is not only

²⁹ For the location of the Theseion cf. Judeich, *Topographie*², pp. 351 ff.; I. T. Hill, *The Ancient City of Athens*, pp. 92, 232 f., note 3.

³⁰ Vanderpool tells me that in his opinion it probably belongs, but the attribution is not free from difficulties.

smaller and more closely set as regards line-intervals, but altogether more carefully and competently engraved; and on these grounds alone it seems impossible to regard these two faces as contemporary. Moreover, a further distinction is to be observed, for the punctuation in *a*, line 6 is: but in the other three fragments by the same hand it is invariably three dots (:) which are seldom exactly vertically set. And another reason for hesitating to ascribe these four pieces to the record of a single year is to be found in the slightly smaller lettering, with correspondingly closer vertical spacing, of *d*, Face *A*, as compared with those of *b* and *c*.

<i>a</i>	(<i>vacat</i>)	<i>b</i>	<i>c</i>
	ΛΛ	ρ ο	ω τ ο . . .
	ϺΦ ϣ	α δ ε	ρ α τ ο Ϻ : 'Α
	ΦΙΑ	σ ί α ι : /	ρ ά τ η ι : Κ ο
	ΓΗΗ	ρ ο τ ε ρ	ξ α μ ε ν . . .
5	↓ ΔΔ	: α ρ γ υ ρ	-----
	Γ† : >	ε κ α τ	
	▣Δ.	μ ο . .	
		! . . .	

Fragment *a*: In view of the wide space vacant above line 1 this is probably from the beginning of a fresh year's inventory, but the interpretation of the remains of lines 1 and 2 is far from certain. If they contained the names of the officials responsible for the inventory, such names as [Κα]λλ[ι -] and [Ῥριστ]οφῶ[ν], [Κηφισ]οφῶ[ν], or [Ξεν]οφῶ[ν] would be obvious suggestions, but, in this case, how many names were contained in these two lines cannot be determined, since we have no clue to the width of the stele or to the formula which accompanied these names. On the other hand, if the names of the officials were recorded on the portion of the stone which is lost from above, and followed by a vacant space equivalent to one or two lines, these might be the remains of the names of dedicators of *φιάλαι* or other votive objects. In fact the first letter of line 1 might equally well be read as an *alpha*, and restored as part of the word [φι]άλ[η (or -αι)], which we may confidently restore in line 3. In lines 4-7 we can only recognize the weights, in each case perhaps incomplete, of some unidentifiable objects. In line 4 the first symbol was perhaps Π rather than Η, and in line 5 Ν rather than Η, as it is so much taller than the *delta* that follows.

Fragments *b*, *c*: At first sight it seems tempting to combine these pieces, with *c* placed to the left of *b*, and restore line 4 so as to read [παραδε]ξάμεν[οι παρὰ τῶν π]ροτέρ[ων ἐπιστατῶν (or ταμιῶν)], indicating that the dative [-κ]ράτῃ in line 3, followed by another dative -σίαι, were the names of two officials who received the contents of this list from the persons named (in the nominative) in lines 1-2; the formula *τάδε παρέδοσαν* would, in this case, be inserted probably between the two sets

b Line 4: [Ἀγ]ροτέρ[ας] seems appropriate here, now that we have rejected [π]ροτέρ[ων], and gains support from Ἑκάτ[ης] in line 6. The restoration of [Ἀγρο-τέρας] in line 2 of No. 2, above, was based on that proposed here, but we need not infer that the same objects are referred to in the same lists.

In line 7 we can find good support for restoring [Ἐρ]μο[ῦ] in the fact that in No. 2 a dedication to Hekate is followed by one to Hermes; moreover, the alternative [σταθ]μό[ν -] would conflict with the use of ἔλκοσα in fragment *d*.

c: The remains of the names suggested above need no further comment.

Fragment *d*. Face *A* of this piece offers more prospects of at least partial restoration, and may be transcribed as follows:

[εῖ]λκοσα:†// -----
 ἔλκοσα:Η[-----ον ἔλκο]
 ν:ΗΔΔΔΔ[-----ξενικὸ ἀργ]
 υρίο ΗΗ[-----στατήρες κίβδη]
 5 λοι:ΔΔ[-----ιον ἄσταθμο(?)]
 ν:φῦλ[λον (or -λα) -----ἀργυρ]
 ἰς:εἰλ[κοσα-----ἔλκο----]
 †:ἀργ[υρὶς(?) -----]

Here again, unfortunately, we cannot hope to establish the length of the lines, for, if in fact, in spite of the somewhat smaller script, it belongs to the same face as *b* and *c*, we get no guidance from either of them.

Line 4: The last two signs are almost certainly ΗΗ, with no punctuation before the first of them, and some such restoration as [ξενικὸ ἀργ]υρίο alone seems possible, for [κεφάλαιον ἀργ]υρίο is not very likely to occur in the middle of a list. In line 5 I have no doubt that -λοι is to be completed as an epithet rather than a noun, since ἦλοι would normally be followed by an adjective describing their metal, and σίγλοι would be followed by Μηδικοί. A possible restoration would be ὑπόξυλοι, descriptive of shields, but we have no other definite indication of such objects among any of our fragments, and a much more likely alternative is [κίβδη]λοι. If this word was preceded, as I suggest, by στατήρες, it would give us nineteen letters in line 4, plus an unknown number of signs to complete the weight for the silver, pointing to a *minimum* length of twenty letters for our lines; but they may in fact have been considerably longer. The restoration [στατήρες κίβδη]λοι seems to gain support from its proximity to the silver bullion, which precedes it, perhaps immediately, in the list and in any case is not without satisfactory parallels among the dedications on the Acropolis.³¹

³¹ In lists of the early fourth century we may compare *I.G.*, II², 1388*B*, lines 53-54, ἀργύριον κίβδηλον τὸ Ἐλευσινόθεν and *ibid.*, lines 61-62, the false staters dedicated by Lakon, mentioned above

Line 6: The initial N, followed by a fresh entry, may very well be the ending of [ᾗσταθμο]ν, but I cannot complete, or elucidate, the leaf (or leaves) recorded next, though it is a permissible guess that they had become detached from a crown.³²

In line 7, possibly [ᾗργυρ]ῖς ἔλ[κοσα --], perhaps followed by a second cup of the same type in line 8.

Fragment *d*, Face *B*.

```

----- ν
----- ι
[- ----- χ]ρν
[σ ----- ι]να
5  [- ----- ᾗ]ργ
   [νρ -----]ΔΔΔ
   ----- ν ἔχῃ
   [ι ----- ᾗργ]νρᾗι
   ----- |▢|||
10 [- ----- σ]ταθμ
   [ὀν -----]ΗΤ
   ----- ||

```

Little can be made of the contents of this face, on which the writing is markedly different from that of Face *A*. We must not be misled by its smaller scale into believing that it belongs to a narrower face of the stele, and is therefore later than that on Face *A*, for it has every indication of being earlier, and at a first glance suggests a date in the late fifth century, which seems to be confirmed by the undoubted Attic *gamma* in line 5. In line 4 the letter before N was probably *iota*; since a broader letter would have left traces at the edge of the fracture; and in line 7 the letter before the first E was almost certainly N, perhaps the end of a noun which was the object of ἔχῃ[ι] (which seems the only acceptable restoration here). In line 9 the first letter, with its centrally-placed *hasta* can only have been an *iota*. Faint traces at the bottom of the fragment suggest two unit-signs (or obols) rather than H. It seems needless to attempt any fuller restoration, and I cannot explain the letters HT in line 11.

10 (Plate 33). Angle-piece inscribed on two adjoining faces, broken on all sides, found in late context immediately north of the Tholos (G 11) on March 3, 1934.

in connection with No. 6. The former item possibly re-appears in II², 1445, lines 16-17, the inventory of the Treasurers of the Other Gods for 376/5 B.C.

³² Cf. four gold leaves from the crown held by Nike on the hand of the statue (of Athena Parthenos), in Parthenon-lists of the early fourth century, *I.G.*, II², 1376, lines 19-21; 1377, lines 22-24; 1394, lines 5-8; 1395, lines 22-24.

Height, 0.0754 m.; width of Face *A*, 0.025 m.; of Face *B*, 0.036 m.; height of letters, 0.011 m. (Face *A*); 0.007-0.008 m. (Face *B*).

Inv. I 1452.

Very little can be made of this piece. As far as may be judged from the scanty remains on Face *A*, the lettering resembles in style that on Face *A* of No. 9, above, but is definitely a little larger, whilst on Face *B* we have no distinctive letter to enable us to decide between a late fifth-century and an early fourth-century date, but the general impression tends to favour the former alternative. In any case it has more cramped and less regularly-cut lettering than on Face *B* of No. 9.

<i>A</i>	<i>B</i>
-----	. ασι:χ -----
----- ων	! ΔΔΔΔ -----
----- στ	. ΗΔΔΔ -----
(vacat)	. χρ[υσ -----]
	5 . . σταθμ[όν -----]
	. χρ]υσο -----
	. . . ον Λ -----
 σο. -----

The fact that Face *A* is uninscribed below the letters ΣΤ does not help us to restore them, and it is not worth enumerating the various possible words in which they occur, any more than for the letters ΩΝ in the line above. With Face *B* the prospect is not much more hopeful, and little need be added by way of comment to the transcript given above.

Line 1 is puzzling: we must presumably read — ασι:χ — — rather than — ασι:χ for which I can only suggest [σταθμὸν οὐκ ἔσ] ασι, but can quote no parallel earlier than that found in a damaged passage in an inventory of the re-united boards of the Treasurers of Athena and the Other Gods (*I.G.*, II², 1457, line 25, not before 338/7 B.C.). Gold objects appear to be recorded in lines 4, 6, and 8, apparently four in number (if not more) in line 4, since there is no punctuation between the last unit and the *chi* of χρ[υσοῖ(?)]; and σταθμ[όν] in line 5 justifies the suggestion that we might restore [σταθμ]όν ἄ[γει] in line 7, though a neuter noun followed by ἄ[ργυροῦν] is an obvious alternative.

In any case these fragmentary entries cannot be recognized elsewhere, and we must not rashly try to identify the object weighing 130(+) drachmai in line 3 with that weighing 140(+) drachmai in No. 9*d*, line 3 of Face *A*.

The possibility that this piece belongs to the same stele as No. 9 must not be overlooked, though the evidence, on the whole, seems to point against it. The writing on Face *B* of No. 10 roughly resembles that on Face *B* of No. 9*d* but is obviously more

cramped and somewhat less regular; but like the latter it might well belong to a late date in the fifth century. We might therefore ascribe this to the right-hand side, and **9d**, Face *B* to the left-hand side of a stele inscribed on three, or even four, sides, implying that Face *A* of both **9** and **10** belonged to the same side. The objection to this, that the letters of **10A** are distinctly larger than on **9a**, *b*, *c*, might be overcome if we regarded them as the remains of the heading of a fresh year's record, separated, for some unknown reason, by a space of at least three centimeters from the inventory itself. If however we also allot No. **9d**, Face *A*, to the same face we find three different sizes of letters employed, and the punctuation : in contrast with : on No. **9a**. The cumulative effect of these difficulties seems to justify us in suspending judgment, and separating No. **10** from No. **9**, while admitting the possibility that if it was a tall stele covering the records of several years, such variations in the script would not be surprising. This assumption would allow us to allocate No. **2**, with two adjoining faces written in Attic script, which clearly differs from that on Face *B* of both Nos. **9** and **10**, to a place higher up on the same stele; with which conclusion the finding-place of No. **2** would admittedly be in agreement.

Any conclusions about the authorities responsible for drawing up these inventories can only be tentative; but two points are beyond dispute, namely that in No. **2**, and (almost equally certainly) in No. **9**, we have lists of the properties of various gods and Heroes, Hermes, Hekate, Artemis Agrotera and Prometheus,³³ and secondly that we have two different formulae for indicating the weight of these objects. In the former we find *σταθμὸν ἄγει* —, and in the latter the participle of *ἔλκειν*, which is also found in No. **3**. Thus we cannot explain this difference of formula on chronological grounds, since the use of *ἔλκοσα* (or *ἔλκον*) occurs both before and after the introduction of the Ionic script; and the suggestion that the two formulae might represent the systems used by two different boards of officials, tempting though it might appear, conflicts with the evidence of Nos. **2** and **9** with their apparently similar contents.

As to the identity of the responsible officials our only clue is the conjectural restoration of [*ἐπιστά*]|*τα*, accompanied by a Secretary, in No. **4**; and as it is by no means certain that this fragment belongs to the same series as No. **9** it would be rash to identify the names in the latter as belonging to the same board. In view of the contents of Nos. **2** and **9** it would be logical to expect that they were in the charge of the *ταμίαι τῶν ἄλλων θεῶν*, but the amalgamation of this board with the Treasurers of Athena from 406/5 to 386/5 B.C.³⁴ seems to rule out this explanation. There is, however, a further possibility, namely that this amalgamation only affected the property

³³ It might be suggested that this reference to the property of Hekate would add weight to the restoration *ἡε[κάτες]* in the accounts of the Logistai, *I.G.*, I², 324, line 70.

³⁴ Cf. Ferguson, *op. cit.*, pp. 6 f., 104 ff. Dinsmoor, *Harv. Stud. Class. Phil.*, Suppl. Vol. I (Ferguson), p. 169 f., hesitates between 406/5 and 405/4 B.C.

of the "Other Gods" stored on the Acropolis, and that during this period their property in other sanctuaries below the Acropolis was in the charge of some other body, whose title may have been "Epistatai."

It is almost equally difficult to suggest a possible location for the objects recorded in any of these lists. Vanderpool, to whom I am indebted for his careful tabulation of the finding places of our fragments, drew my attention to the fact that Nos. 2, 3, 4, 9 and 10 were all found either directly adjacent to, or within a small radius (*ca.* 25 meters) of the Tholos, and suggested that possibly the contents of these lists were in fact kept in the Tholos itself. This suggestion would carry more weight if we had any contemporary evidence for its use as a repository for such objects, but what evidence there is concerning its contents belongs to much later times. The decree of 191/0 B.C.,³⁵ found on the spot, does not relate to votive objects, but to the administration of the building and its contents as a center of hospitality—the replacement of bedding, the inspection of *κοτυλίδια* and tripods (obviously kitchen equipment) and of other vessels, including *φιάλαι* and *ποτήρια*, which must have belonged to the table-services. And the "silver images of no great size," seen by Pausanias in the Tholos,³⁶ may well have been recent acquisitions, for no such objects are, to my knowledge, recorded in Attic inventories of the fifth or fourth century.

The argument from the find-spots of these fragments would, however, be equally appropriate to another building which closely adjoined the Tholos, namely the Metroön. This has a stronger claim to consideration for we know that, in addition to being the repository of state-archives,³⁷ it also contained votive objects. This information is derived from the evidence of an inscription, *I.G.*, II², 1445, the first dated inventory surviving from those drawn up in the fourth century by the *ταμίαι τῶν ἄλλων θεῶν* (376/5 B.C.), where we read in lines 24-26 [— — ἐκ τ]ὸ Μητρώϊο παρακαταθήκη· χερ[νιβεῖον ἀργυρῶν, σταθμὸν — —]ΔΠΤ τοῦτο οὐχ ὑγιές· ἐξαγιστ[— — — σεσημασμένα(?) τ]ῇ δημοσίαι σφραγίδι. But it seems possible to trace this entry at a somewhat earlier date, for I would suggest that we may recognize the same *χερνιβεῖον* in the inventory of the contents of the Hekatompedon drawn up by the Treasurers of the joint board in 390/89 B.C. (*I.G.*, II², 1400, lines 50-51) where we find [χ]ερν[ι]-βε[ῖ]ον ἀργυρῶν, θυμιατήριον ἀργυρῶν, ἄστατα· following a vacant space (where the stone is broken) in which there would be ample room to insert ἐκ τῷ Μητρώϊο παρακαταθήκη. Moreover, there would be room for a similar entry, perhaps in shortened form, in II², 1401, line 36 (to be dated shortly before II², 1400, though the exact year is unknown); in each of these lists this entry would precede a dedication to Artemis Brauronia by Glyke, daughter of Archestratos, so there can be little doubt of its identity.

³⁵ Cf. *Hesperia*, Suppl. IV, 1940, pp. 144 f.

³⁶ *I.*, 5, 1.

³⁷ Judeich, *Topographie*², pp. 342 f.; I. T. Hill, *op. cit.*, pp. 47 ff.

It emerges from this that at some date before *ca.* 392 B.C. certain vessels described as a *παρακαταθήκη* from the Metroön had been transferred to the Hekatompedon, and in turn entrusted to the care of the "Treasurers of the Other Gods" when this board was revived in 385/4 B.C. This need not imply that the whole of the dedications preserved in the Metroön were thus transferred, but it gives us convincing proof that in the first decade of the fourth century, and presumably earlier—though we cannot tell for how long—sacred objects were contained in it. And, failing the possible discovery of evidence to the contrary, we may reasonably suggest that some at least of these inventory-fragments relate to the contents of that historic building.

Ἐξάγιστος.

The restoration [— — ἐξαγ]ίστο proposed in line 2 of No. 4, above, seems to justify the addition of a note drawing attention to other examples of this word in Attic inscriptions, not all of which have been recognized or commented on.

(1) In *I.G.*, II², 1401, lines 26-27 were read ἐξαγίστο χρυ[σ]ίο συμμείκ[το ἀσθήμο]σταθμὸν [ἩΔΤΤΤΤΤΤ], which is so restored with the aid of II², 1400, lines 42-43, where we have [— — συμμείκτο] ἀσθήμο σταθμὸν [Ἡ]ΔΤΤΤΤΤΤ. This item is to be distinguished from

(2) which is an entry, including the same word, recorded as coming from the Metroön, by the Treasurers of the "Other Gods," in II², 1445, lines 25-26. Here we have, according to the text given in the *Corpus* ἐξαγίστ[ο.....¹⁴.....σεσημασμένα τ]ῇ δημοσίαι σφραγίδι, and what is obviously the same entry recurs in II², 1453, lines 10-11, in the form ἐξαγίστ[ο] ε[.....¹⁵.....σεσημασμέν]α τῇ δημοσίαι σφραγίδι. After careful scrutiny of the stone, of which the surface is somewhat damaged, I would read ἐξάγιστα ἐν κ[.....¹¹.....σεσημασμέν]α, κ.τ.λ., and would suggest, to fill the gap, ἐν κ[οιτῇ χαλκῇ, κ.τ.λ.].

(3) That the epithet was not used exclusively in reference to uncoined metal as in (1) (we do not know to what objects no. 2 refers), is proved by a passage in II², part ii, *Addenda*, pp. 800 ff., 1424a, lines 307-308, where we can correct the reading in the *Corpus* ΤΟΝΕ[.]ΑΡΙΞ[.]Ω[.] into ΤΩΝΕΞΑΓΙΞΤΩΝ, above which, in the latter part of line 307 the text printed gives merely ΟΑ...⁷...Μ — — —. Here I have deciphered enough to justify the reading [τ]ὸ ἀπὸ τῶν θυμιατηρίων. We cannot tell from this what was the object removed (or made?) from the ἐξάγιστα θυμιατήρια, but it is clear that ritual vessels could be so described.

That the epithet could also be applied to other votive objects may be seen in (4), namely II², 1544, line 22 (Eleusis, engraved in 329/8 B.C.), where we find σίγλοι καὶ ἄσχοι ἐξάγιστοι weighing 4 drachmai, 1½ obols. This item I do not profess to under-

stand, for, though we may interpret *σίγλοι* as “ear-rings” on the authority of Photios (cf. L. S.,⁹ *s.v.*), *ἄσχοι* must mean here some kind of small metal ornaments, and obviously not wine skins or clay vessels in the normal senses of the word. Moreover, in the following entry *σί[γλοι]* are coupled with a ring, which seems conclusive for that word, but for this sense of the word *ἄσχοι* I know of no other evidence.

For a general meaning to suit all these instances of *ἐξάγιστος* the literary evidence must not be overlooked. In Sophocles, *O.C.*, 1526, *ἐξάγιστα* is used of the mysterious setting of Oedipus’ death, and in Aischines, *Or.* III, 113, we have mention of an *ἐξάγιστος καὶ ἐπάρατος λιμὴν*, the “banned and accursed harbor”; “banned,” in fact, as Jebb’s note (*O.C. ad loc.*) makes clear, is the sense indicated for both these passages. But it is far from clear how objects dedicated in sanctuaries could be described as “banned,” whereas if they had somehow been defiled and “de-consecrated” they might still be retained, and weighed and recorded along with the other votive objects. Rouse, in discussing no. (4), (*Greek Votive Offerings*, p. 313), suggests that the *σίγλοι* and *ἄσχοι* at Eleusis were “forfeit and consecrated in the shrine” because the worshippers’ dress may have been prescribed and the wearing of jewels and ornaments forbidden; and this explanation is accepted by the editors of L.S.⁹

Whether or no such a regulation was strictly enforced at Eleusis (where, if it existed, enforcement would surely have been strict), this explanation will hardly account for the examples of the word *ἐξάγιστος* mentioned earlier, where the sense “de-consecrated” seems more suitable. In this connection we must not overlook the use of the substantive *ἐξάγισις* in a mid-fifth century decree relating to tolls on shipping at Sounion (*S.E.G.*, X, 10), where we read *ἡο<π>όσοι δ’ ἂν καταθῶσιν τὸ [ἀ]ργύριον τὸ ἐπ’ ἰ τῆς ἐχσαγίσεως, εἶναι αὐ[τ|οῖς ἡόρμον καθάπ]ερ Σουνιεύσι*. Wilhelm’s conjecture *τὸ [ἐ]λλιμένιον(?)*, *ἐπ’ ἰ τῆς ἐχσαγίσεως εἶναι αὐ[τ|οῖς τὰ τέλε(?) καθάπ]ερ Σουνιεύσι* does not shed further light on the meaning of the word; but if we retain the original conjecture, the *ἀργύριον τὸ ἐπ’ ἰ τῆς ἐχσαγίσεως* might be reasonably interpreted as the fine levied on merchant-ships for violating the sanctity of the harbor at the time of the festival, when only vessels on sacred duty might normally be permitted to enter the harbor, such as the *θεωρίς* captured by the Aeginetans on a famous occasion of which we read in Herodotos.³⁸

II

Hesperia, XVII, 1948, pp. 33 f., No. 16; Agora I 2260.

Certain of the items recorded in this fragment of an Inventory can be definitely recognized in earlier lists drawn up by the Treasurers of Athena. With the aid of a squeeze of the upper portion (lines 1-22), kindly supplied by Meritt soon after it was discovered, I had succeeded in identifying most of the contents, and had worked out

³⁸ VI, 87.

a restoration with, normally, 48 letters to the line. Both the style of the lettering and the allusions to the damaged condition of some of the objects listed (cf. οὐχ ὑγιές, lines 9 and 13) would, in any case, indicate a date after the middle of the fourth century B.C., even if we had not the clear references in the lower fragment, found later, to the Archonships of Themistokles (347/6 B.C.) and Archias (346/5 B.C.). The form of the inventory also supports this conclusion, for it is typical of the group of stelai on which the items are listed in columns of continuous text, a system more economical of space than that previously in use where each item begins with a fresh line, of which the latest example is *I.G.*, II², 1441, dating, I believe, from 347/6 B.C.

Thus the earliest possible date for our present list would be 346/5, in which case we should interpret the mention of the Archonship of Archias as introducing the list of accessions of the current year, with the phrase Τάδε προσπαρέδοσαν ταμίαι οἱ ἐπὶ Ἀρχίου ἄρχοντος, but this cannot be confirmed as it is not possible to reach a satisfactory restoration for any of the last ten lines. Apart from the fact that the arrangement of the contents precludes us from combining it with either II², 1443 (344/3 B.C.) or 1444 + 1455 (341/0 B.C.) we must be content with an approximate date, most probably within the decade 346/5-336/5.³⁹ Two reasons combine to render a later date unlikely, namely the general tendency of the engravers of these lists to use progressively narrower columns from about 340 B.C. onwards, and the fact that under the reforms of Lykourgos, commencing in 334/3 B.C., the older dedications and ritual vessels were sent to the melting-pot, to be made into fresh ritual furnishings.⁴⁰

Whilst the normal length of line, as already mentioned, is 48 letters, we must note an occasional inconsistency in the use of the punctuation : , which as a rule occupies a space before and after the weight-signs, but does not do so in line 15; and the fact that in line 21 the spacing of the last two surviving letters ΟΥ indicates that the six letters of the word [τούτ]ον were compressed into five spaces. This justifies the assumption that an extra *iota* may be reasonably inserted in lines 7 and 15, as the proposed restorations require; on the other hand ὀρμίσκος in line 27 is spread out so as to occupy nine spaces. I have assumed in my transcript that two more letters are missing at the end of each line than are indicated in Meritt's original publication.

³⁹ One might be tempted to attribute this to the same stele as *I.G.*, II², 1457, to which II², 1458 is to be joined below (with two or three lines missing between them), since this list also has 48 letters to the line, engraved in a very similar style; and the date, possibly 338/7 B.C., would suit, but it is only 0.113 m. thick, as against 0.13 m. for our present list, which seems a decisive objection.

⁴⁰ Cf. *I.G.*, II², 333 for the resolution of the Nomothetai on this matter; II², 457, the decree moved by Stratokles in 307/6 B.C. in honor of Lykourgos for his financial services, and II², 1493-6 for the surviving epigraphical evidence for the melting down of the old crowns and metal vessels. Plutarch, *Vit. X. Orat.*, 852 B, briefly describes the new objects of precious metal made from the proceeds. Cf. also W. S. Ferguson, *The Treasurers of Athena*, pp. 122 ff.; and for the restoration of a passage in II², 1495 relating to the melting-down process, my note in *Num. Chron.*, 1951, pp. 109-111.

- [.....³⁶.....] ϞX[.....⁷.....] Λ[...]
 [.....³³..... ἀργ]υρί[ον.....⁷.....]
 [.....²⁶..... οὐ]χ ὕγ[ιᾶ στ]αθμὸ[ν.....⁸.....]
 [.....³⁰..... τῶ]ν θυμιατη[ρι]ων[.....]
 5 *vacat.*
 [θυμιατήρια ἀργυρᾶ τρία οὐχ ὕγιᾶ παρὰ τ]ῇν τράπεζαν, ἄ[στατα·]
 [κανοῦν ἵνα τὰ ἐλεφάντινα ζῶια, ἄστατο]ν ταῦτα οὐκ ἐστᾶ[θη· θυμ]
 [ιατήριον ἀργυρῶν ὑπόχαλκον·σταθ:]XϞHHHHΔ[ΔΓ]ΗΗ:[ἔτερον]
 [θυμιατήριον ὑπόχαλκον ἐπάργυρον]οὐχ ὕγιές, ὁ Κλεο(σ) [τράτῃ]
 10 [ἀνέθηκεν, σταθ:XHHHΔΔ:..... ἀπέαγ]εν:ϞΔΔΔΔΗ: κα[νοῦν χαλ]
 [κοῦν ἐπίχρυσον ἵνα ὁ Ζεύς, διακεκομμ]ένον, σταθμὸν: X[XXϞHH:]
 [ἔτερον θυμιατήριον ἐπάργυρον χαλ]κᾶ διερείσματα ἔ[χον ὁ⁹]
 [Ἀριστόκριτος Ἀνακαίεὺς ἀνέθηκε]ν οὐχ ὕγιέ[ς], σταθ:X[X[HHHΔ]
 [ΔΔ: Ἀθηνᾶς Νίκης θυμιατήριον χαλ]κῶν ὑπάργυρον χαλκ[ᾶ διε]
 15 [ρείσματα ἔχον διακεκομμένον οὐχ] ὕγιΞσταθ:XXHΔΔ: ἐπηγ[έγρα]
 [πτο ἱερὸν τῆς Ἀθηνᾶς Νίκης·σταθμ]ὸν τούτων:ϞϞHHHHHϞΗ[...]
 [τάδε παρέλαβον(?) οἱ ταμίαι χρυσᾶ] κατὰ μικρὸν ἰστάμενα[: ὄμφ]
 [αλοι φιαλοῖν δυοῖν, σταθμὸν :ΓΗ: εἰ]λικτ[ῆρ]ες χρυσοῖ[:]||, σ[ταθ]
 [μὸν:ΗΗΗ||| :· λείαι χρυσαῖ δοκιμ]εῖ[α, ἀριθμὸ[ς Δ]ΔΔΔΓ], [στα]
 20 [θμὸν: ϞΔΔΔΓΗΗΗ|||: κανοῦν χαλκοῦν ἐπ]ίχρυσο[ν αὐ]τόσ[τατον]
 [ἵνα ὁ Ἀπόλλων, σταθμὸν:XXXϞϞΔΔΔΔΓΗ: τούτ]ον σταθμὸν:ΗΔΔ[...]
 [ἀπέαγεν(?) : χρυσᾶ καὶ ἀργυρᾶ ἂ] παρέλαβον(?) οἱ χ[ρυσω]ταῖ, ἄσ[τατα].
 [.....³¹.....] ὑποδερὶς *vacat* (?)
 [.....²⁵.....]οἱ ταμίαι ἐπὶ Ἀρι[στοδήμου ἄ]
 25 [ρχοντος ὑποδερὶς, σταθμὸν σὺν τῶι λ]ίνωι: ΗΗ *vacat.*
 [Τάδε παρέδοσαν ταμίαι τῶν ἄλλων θεῶ]ν ἐπὶ Θεμιστ[οκλέους ἄ]
 [ρχοντος.....²².....] ὀρμίσκος *vacat.*
 [.....³⁰.....]οἱ ταμίαι οἱ τ[ῶν ἄλλων]
 [θεῶν(?).....²⁷.....] PABA[...]
 30 [.....³⁰.....]ους ταμία[ις(?).....⁶.....]
 [.....³⁴.....]ἐπ' Ἀρχί[ο]ν ἄρχοντο
 [.....³⁸.....]φ[ύλλον χρ]υσῶν...
 [.....³².....]στα]θμὸν : [.....⁸.....]
 [.....³⁶.....]τάδε [παρέδοσα]
 35 [.....³⁶.....]πίνα [ξ(?).....⁶.....]
 [.....³⁸.....]οἱ[.....⁷.....]

Line 1: Where Meritt reads ΓΕΧΩΝ I am sure that we must read ϞX—. This total of 6000(+) drachmai must be a summation of the weights of several preceding items, as in line 16 below. For this uncommon type of entry cf. II², 1444, lines 27-30,

where two *χερνιβεία* are weighed first separately and then together. Above the \mathbb{P} is a stroke which might be the lower bar of a *sigma*, but it is too uncertain to be worth transcribing.

Line 3: Where Meritt reads]ρω[.στ]αθμ:[, I see <ΥΓ, i. e. [- - οὐ]χ ὑγ[ιᾶ στ]αθμὸ[ν - -].

Line 4: I do not feel certain of any letters except *ν θυμιατη. .ων*, which it is rather tempting to restore as [ἀπὸι τῶ]ν θυμιατη[ρί]ων [χρυσίον, ὃ παρὰ Καλλιμάχῳι ἡύρέθη, σταθμὸν -], as found in II², 1421, I, lines 16-17 (374/3 B.C.); but it must be admitted that it cannot be recognized in any subsequent list, and its definite absence from II², 1424a, of a few years later, is perhaps significant. If we venture to restore it here it would fill 31 letter-spaces, without the unknown weight-figures, and if these did not exceed two they would not have extended on to the legible portion of the text. But an entry of this length would satisfactorily account for the blank space left in the remainder of the line; whereas an almost, if not entirely, blank line seems unlikely at this stage of the list.

With line 6 we come to a series of familiar objects, which enable us, on the whole, to complete the next fifteen lines. To begin with, the restoration [θυμιατήρια ἀργυρᾶ τρία παρὰ τ]ῇν τράπεζαν ἄ[στατα], which is supplied by II², 1424a, lines 188-189 (and has enabled the same entry to be restored in II², 1413, line 15, *ca.* 380 B.C.,⁴¹ and 1425, lines 134-135)⁴² would leave us with seven vacant spaces, which we may confidently fill by inserting οὐχ ὑγιᾶ after the word *τρία*. They have not survived in any intervening list, nor can they be found in any list later than ours.

Line 7: Ταῦτα οὐκ ἐστάθη is a new expression for unweighed objects grouped together, in these inventories, but we may compare ἐστάθη δὲ καὶ ἐξητά[σθη] of some unidentifiable object(s) in II², 1463A, line 13. The first 31 letter-spaces can be exactly filled with the *κανοὺν ἵνα τὰ ἐλεφάντινα ζῶια, ἄστατον*, which directly follows the three Thymiateria in II², 1424a and 1425, if we assume that at one point two letters occupy one space, for which I would suggest ἵνα as the most likely.

Line 8: The weight Χ \mathbb{P} HHHHΔ. .HH, which might be 1919, or 1924, or 1928 or 1933 drachmai (as the eighth and ninth signs have been lost through a surface injury), is not recognizable elsewhere, but if we assume that 1928 is an error for 2428 (\mathbb{P} for X), we have here the weight of a Thymiaterion as recorded in II², 1424a, line 165; and I restore this item here, with the abbreviation *σταθ*: as found below, in lines 13 and 15.

⁴¹ W. S. Ferguson, *The Treasurers of Athena*, p. 182; some of his other restorations of this text are far from convincing. For the date, cf. my remarks in *Harv. Stud. Class. Phil.*, Suppl. Vol. I (Ferguson), pp. 392 f.

⁴² *I.G.*, II², *Addenda* (1931), p. 805, by the Editor.

Lines 9, 10: The Thymiaterion dedicated by Kleostrate⁴³ and weighing 1320 drachmai is known already from II², 1424a, lines 167-169; 1425, lines 115-116; 1428, lines 133-135; 1438, II, lines 9-10; and can be traced still earlier in 1407, lines 11-12 (restored),⁴⁴ of 385/4 B.C., and 1413, lines 4-5 (*ca.* 380 B.C.).⁴⁵ The following sum, 92 drachmai, is mysterious, and since twelve letters at most, ending in *-εν*, cannot contain the description of another object, I assume that this represents an amount either added to, or more probably lacking from, the weight of the Thymiaterion. Assuming the latter view, the total weight should be restored as 1228 drachmai, which would leave us with nine letters ending *-εν*. The more usual term to indicate such a deficiency in these lists is *τούτωι* (*vel sim.*), *ἐνδεί*, as in II², 1463A, lines 15 ff.; 1440B, lines 30 ff. (but *ἐνέδει*, line 31). I can only suggest, as the N is quite certain and the E almost equally so, that we should restore here [*κατέαγ*]*εν*, or perhaps preferably [*:ἀπέαγ*]*εν*, comparing *κατεαγός*, also of a *χερνιβείον*, 1445, line 30 and *ὄνυξ κατεαγός*, 1425, II, line 209 (and elsewhere); and more appositely, *τούτω[ν τὰ ἔλυτρα κατ]έαγεν*, II², 1469B, lines 94 f.

Lines 11-15: At the end of line 10 we need not hesitate to restore *κα[νοῦν χα|λκὸν ἐπίχρυσον, ἵνα ὁ Ζεὺς, κ.τ.λ.]*, (or, if we insert an extra letter at the end of the line, reading *χαλ|κοῦν*), the description of which as [*διακεκομμ*]*ένον* is confirmed by its being entered as [*διακεκομμένον?*] *οὐχ ὕ[γι]ές* in 1443, lines 159 f. In any case we apparently require, as in line 7 above, to compress the word *ἵνα* into two spaces. It is admittedly curious to find this *κανοῦν* entered in the middle of a list of Thymiateria, but the fact seems beyond question. The weight should, however, be 3690 drachmai, for which the available space does not suffice, and rather than assume that the last three *deltas* have been omitted, it seems preferable to restore the weight as 3700 drachmai, XXXVIIH, ending with a stop (:). That the end of the weight-signs was not carried over to the following line seems clear, as we need not hesitate to restore the following item as the Thymiaterion dedicated by Aristokritos, which normally accompanies that of Kleostrate; and, as the transcript shows, the words *ἕτερον θυμιατήριον ἐπάργυρον χαλκῶ διερείσματα ἔχον* will exactly fill the available space if it starts at the beginning of the line. Meritt, unfortunately, read the letters preceding *διερείσματα* as *καὶ*, instead of *-κα* forming the end of [*χαλ*]*κῶ*, and thereby failed to identify the description, which might have furnished him (as it did myself) with a sure clue to the length of the lines. After the weight, 2330 drachmai, which is presumably correct this time, comes another familiar vessel, the Thymiaterion of Athena Nike, also damaged, but given its regular weight of 2120 drachmai. I agree with

⁴³ Meritt prints *Κλεον*[...], and admittedly there appear to be traces of a vertical stroke close to the edge of the damaged surface; but whether the engraver wrote mistakenly *Κλεον*[*ίκη*] or *Κλεοβ*[*ούλη*] we can scarcely hope to decide.

⁴⁴ Cf. *Harv. Stud. Class. Phil.*, Suppl. Vol. I (Ferguson), p. 384.

⁴⁵ Cf. *supra*, p. 104, note 41.

Meritt in reading οὐχ ὕγι Ξ σταθ: though the sign after the *iota* is not the colon (:) but three rather irregular short strokes like an untidy E lacking its vertical stroke. The description as ὑπάργυρον is no doubt an error of the engraver's for the normal ἐπάργυρον. At the end of line 15 we must assume that ἐπηγ- is an error for ἐπεγ[έ-γραπτο], presumably followed by ἱερὸν τῆς Ἀθηνᾶς Νίκης, though this inscription is not attached to this entry in any other list, as far as I know.

Line 16: The total 5952+ drachmai must presumably refer to the weights of the three Thymiateria, of Kleostratē, Aristokritos and Athena Nike, but their correct weights, 1320 + 2330 + 2120 drachmai, equal only 5770. No convincing explanation can be offered for the difference of 182(+) drachmai; and even if, as seems just possible, the 92 drachmai weight of metal mentioned as broken off from the first of these vessels were added to, instead of subtracted from, the original weight of 1320 drachmai we should still be ninety drachmai short. Further speculation would be unprofitable.⁴⁶

Lines 17-19: The expression κατὰ μικρὸν ἰστάμενα, describing groups of small objects weighed together, is hitherto unknown in this form in these lists, but we may compare [ἐκ τῶν] κατὰ μικρὸν παραδιδом[ένων] in II², 1479A, lines 26-27, and, I would suggest, we should restore in II², 333, line 27 [τὰ κα]τ[ὰ] μικρὰ [ἰ]στάμενα instead of τ[ὰ] μικρὰ [ἰ]στάμενα, as in the *Corpus*.⁴⁷ We may assume that this entry was preceded by a verb, and to complete the first part of the line we may conjecture Τάδε παρέλαβον οἱ ταμίαι χρυσᾶ, as at least indicating the sense.

Passing over, for the moment, the first item under this heading, we may readily recognize the second and third, namely the two gold εἰλικτήρες and the forty-six λείαι χρυσᾶι, δοκιμεῖα, familiar in many lists (e. g. II², 1425, lines 35-36; 1436, II, lines 55 and 58-59); and in the latter the εἰλικτήρες are directly preceded by ὄμφαλοι φιαλοῖν δυοῖν weighing six drachmai, which in fact will exactly fill the space available for our first item here; and may be restored accordingly. The fact that in II², 1424a, lines 170 ff. this item appears under the heading τάδε ἀργυρᾶ makes me feel some uncertainty about the correctness of χρυσᾶ in the proposed restoration of the phrase which introduces this item, but does not seem to condemn it finally.⁴⁸

⁴⁶ It is just conceivable that the weight of the second Thymiaterion was entered, either by a mistake, or as the correct weight after repair, as 2420 drachmai, which would occupy the same space on the stone as 2330. If the whole difference was only 182 drachmai, implying that there were two *vacats* at the end of the line, this might solve the problem, if the first suggestion is also valid.

⁴⁷ Several other improvements might be suggested for this important text: in any case we might substitute for τῶν κατὰ μ[έρος -] in line 29 τῶν κατὰ μ[ικρὰ ἰσταμένων-] and in line 10 of fragment *d* for ΠΟΝΞΛΞ read ποησάσ[θαι], as in line 3 of fragment *c*.

⁴⁸ These ὄμφαλοι may have been silver-gilt; cf. also a φιάλη ἀργυρᾶ χρυσόμφα[λος], at Eleusis, II², 1544, lines 29 f.

Lines 20-21: We need not hesitate to recognize in the letters $\text{--}\chi\rho\upsilon\sigma\omicron\text{...}\tau\omicron\sigma\text{--}$ the remains of the words $[\acute{\epsilon}\pi\acute{\iota}]\chi\rho\upsilon\sigma\omicron[\nu\ \alpha\upsilon]\tau\omicron\sigma[\tau\alpha\tau\omicron\nu]$, which appear in II², 1436, II, line 49 in the description of the gilt-bronze $\kappa\alpha\nu\omicron\upsilon\nu\ \acute{\iota}\nu\alpha\ \delta'\ \text{Ἀπόλλων}$, which there precedes the similar $\kappa\alpha\nu\omicron\upsilon\nu\ \acute{\iota}\nu\alpha\ \delta'\ \text{Ζεύς}$ (which is not $\alpha\upsilon\tau\omicron\sigma\tau\alpha\tau\omicron\nu$). We may therefore insert it here, crowding in the final ν of the epithet at the end of the line; and after inserting its normal weight of 3596 drachmai we are met with another puzzling entry, $\text{...}\sigma\tau\alpha\theta\mu\omicron\nu\ \text{Η--}$, which is obviously too short to constitute a fresh item, and must therefore relate to the $\kappa\alpha\nu\omicron\upsilon\nu$, though in different terms from those used of the damaged Thymiaterion in line 10 above. Our choice seems limited to $[\tau\omicron\upsilon\tau]\omicron\nu\ \sigma\tau\alpha\theta\mu\omicron\nu\text{:}\text{Η}\Delta\Delta$ [$\text{--}\acute{\alpha}\pi\acute{\epsilon}\alpha\gamma\epsilon\nu$], which would imply that the letters ΤΟΥΤ were crowded into three spaces, as seems to have been the case in view of the final ΟΥ of line 21 not being placed directly beneath the XP in the line above, but more cramped; and also that the punctuation-sign after the weight of the vessel does not occupy a separate space. How much more than 120 drachmai weight of metal was recorded as missing is an insoluble problem.

From here to the end of our fragment it seems impossible to restore any continuous sense, though a reasonably likely restoration may be proposed for line 27. But it is worth emphasizing that from line 7 onwards our list has proved to follow fairly closely the order of the items recorded in II², 1436, II, lines 41 ff., except that the $\kappa\alpha\nu\omicron\upsilon\nu\ \acute{\iota}\nu\alpha\ \delta'\ \text{Ζεύς}$ has been moved up to a place among the Thymiateria, and also that there is a more detailed description attached to the damaged objects.

Lines 22-24: Where Meritt reads $\text{--}\text{ΟΥ}\text{...}$ in line 22 I seem to see PY , with possibly the upper right-hand stroke of X before them, in any case pointing to $\chi\rho\upsilon[\sigma\text{--}]$, which we might combine with the other letters further to the right so as to read $\chi\rho\upsilon[\sigma\omega]\tau\alpha\acute{\iota}\ \acute{\alpha}\sigma[\tau\alpha\tau\alpha]$, and suggest, *e.g.* [$\text{--}\text{--}\tau\acute{\alpha}\delta\epsilon\ \pi\alpha\rho\acute{\epsilon}\lambda\alpha\beta\omicron\nu\ \omicron\acute{\iota}\text{--}\chi\rho\upsilon[\sigma\omega]\tau\alpha\acute{\iota}\ \acute{\alpha}\sigma[\tau\alpha\tau\alpha]$], which would necessarily imply the absence of a weight in the space following the $\upsilon\pi\omicron\delta\epsilon\rho\acute{\iota}\varsigma$ in line 23. The assumption that the rest of that line was blank indicates that a new paragraph, if we may so call it, begins in line 24, which would more easily explain the presence of the name of the Archon Aristodemos. This $\upsilon\pi\omicron\delta\epsilon\rho\acute{\iota}\varsigma$ is not easy to identify, but possibly we should recognize in it the $\upsilon\pi\omicron\delta\epsilon\rho\acute{\iota}\varsigma$ which, with other objects of gilt wood ($\upsilon\pi\omicron\acute{\xi}\nu\lambda\alpha\ \kappa\alpha\tau\alpha\kappa\epsilon\chi\rho\upsilon\sigma\omega\mu\acute{\epsilon}\nu\alpha$) was recorded as in the Opisthodomos, $\acute{\epsilon}\nu\ \kappa\iota\beta\omega\tau\acute{\iota}\omega\iota$, in 398/7 B.C. (*I.G.*, II², 1388B, lines 75-76, though this is in fact a list of objects in the Hekatompedon). This chest and its contents, handed back to the care of the $\tau\alpha\mu\acute{\iota}\alpha\iota\ \tau\omicron\omega\nu\ \acute{\alpha}\lambda\lambda\omega\nu\ \theta\epsilon\omicron\omega\nu$ in 385 B.C., re-appears in two of the lists drawn up by them (II², 1450 and 1451, probably both dating from between 365 and 360 B.C.); and when the two Boards of Treasurers were again united, the chest and its contents, if still complete, would have been returned to the $\tau\alpha\mu\acute{\iota}\alpha\iota\ \tau\omicron\omega\nu\ \tau\acute{\eta}\varsigma\ \theta\epsilon\omicron\upsilon$ under the arrangement made, as I believe, in 346/5 B.C.⁴⁹

⁴⁹ For this date cf. *Harv. Stud. Class. Phil.*, Suppl. Vol. I (Ferguson), pp. 405 f.

On this view we might expect to find other items from this, or some other similar Hekatompedon-list, in the remaining lines of our stele; and one of these, I would suggest, is the item found in line 25, — — $\iota\omega\iota:\text{tt}$, which we may complete as [— — $\sigma\tau\alpha\theta\mu\acute{o}\nu\ \sigma\acute{\upsilon}\nu\ \tau\acute{\omega}\iota\ \lambda\acute{\iota}\nu\omega\iota:\text{tt}$, and identify with some confidence as the uncertain object recorded in the fragment which I added to II², 1388 (*J.H.S.*, LI, 1931, p. 157). There we have [— — $\sigma\tau\alpha\theta\mu\acute{o}\nu$] — — $\text{tt}\ \sigma\acute{\upsilon}\nu\ \tau\acute{\omega}\iota\ \lambda\acute{\iota}\nu\omega\iota$] and the word $\sigma\tau\alpha\theta\mu\acute{o}\nu$ may equally well have immediately preceded the two drachma-signs. The object was presumably a necklace, weighed with its string,⁵⁰ and described as a $\acute{\upsilon}\rho\pi\omicron\delta\epsilon\rho\acute{\iota}\varsigma$.

The mention of the Archonship of Aristodemos in line 24 raises a difficulty which must not be ignored, but cannot be satisfactorily explained. If the fusion of the two Boards of Treasurers took place in 346/5 B.C.,⁵¹ we may wonder why an object belonging to Artemis Brauronia should have been, apparently, handed over to the Treasurers of Athena six years earlier, in the Archonship of Aristodemos (352/1). A possible answer may be suggested if we take into account the creation of the Board of $\acute{\epsilon}\pi\iota\sigma\tau\acute{\alpha}\tau\alpha\iota$ to take charge of the votive offerings dedicated to Artemis Brauronia, whose inventories are collected in *I.G.*, II², 1514-1531. The precise date of its creation is unknown, but little can be said in favor of the suggestion of Hondius⁵² that it should be dated to the period 376/73 B.C. and associated with the activities of Androktion which he would attribute to those years. Ferguson has dealt effectively with this view,⁵³ but is undoubtedly mistaken in trying to bring down the date as late as 342/1, and to connect the institution of the Board with the abolition of the $\tau\alpha\mu\acute{\iota}\alpha\iota\ \tau\acute{\omega}\nu\ \acute{\alpha}\lambda\lambda\omega\upsilon\upsilon\ \theta\epsilon\acute{\omega}\nu$. That this late date is impossible is proved by *I.G.*, II², 1524, where we find mention of the Epistatai (of the Brauronia) in the Archonship of Thoudemos (353/2 B.C.). If, as seems probable, this board was created in a Panathenaic year, 354/3 would be a possible date, though it might be put back four, or conceivably eight, years earlier. But, on the whole, 354/3 seems the most likely choice, since we find in II², 1524 more than one entry indicating that the Epistatai were gathering together from other sanctuaries miscellaneous small votives of precious metal, such as three (?) $\rho\omicron\mu\phi\acute{o}\lambda\upsilon\gamma\epsilon\varsigma$ ⁵⁴ and a ring handed over by the priestess $\acute{\epsilon}\kappa\ \tau\omicron\upsilon\ \acute{\alpha}\rho\chi\alpha\acute{\iota}\omicron\upsilon\ \nu\epsilon\acute{\omega}$ (col. II, lines 44 ff.) to the Epistatai of 353/2 B.C., and a ring and two necklaces dedicated in the Parthenon and handed over by the Epistatai of 352/1 to those of 351/0 (*ibid.*, lines 51-59; cf. Hondius, *op. cit.*, p. 65, note 6).

⁵⁰ There are numerous dedications of this nature in the Brauronia-inventories, e. g. *I.G.*, II², 1524A, II, lines 65-67, $\acute{\iota}\phi\iota\delta\acute{\iota}\kappa\eta\ \acute{\iota}\phi\iota\kappa\rho\acute{\alpha}\tau\omicron\upsilon\varsigma\ \theta\upsilon\gamma\acute{\alpha}\tau\eta\rho\ \acute{\upsilon}\rho\pi\omicron\delta\epsilon\rho\acute{\iota}\delta\alpha,\ \sigma\tau\alpha\theta\mu\acute{\iota}\ \sigma\acute{\upsilon}\nu\ \tau\acute{\omega}\iota\ [\lambda\acute{\iota}\nu\omega\iota:\text{tt}]\text{IC}$; in lines 72-74 is another $\acute{\upsilon}\rho\pi\omicron\delta\epsilon\rho\acute{\iota}\varsigma$ together with a $\mu\eta\nu\acute{\iota}\sigma\kappa\omicron\varsigma$, from the same donor. Cf. also col. III, lines 104-105 and 109-110.

⁵¹ See note 49.

⁵² *Novae Inscriptiones Atticae*, p. 68.

⁵³ *Op. cit.*, pp. 116 f.

⁵⁴ For this term, meaning apparently a "bubble-like" bead or pinhead, cf. line 13 of the long fragment from Aristophanes, *Thesmoph.* II (Bergk 6) quoted by Pollux, *Onom.*, VII, 95-96.

A similar transfer is perhaps indicated in line 26, in connection with the year of Themistokles (347/6), including a *ὀρμίσκος* (line 27), an item which cannot be traced for certain among the treasures of Athena; but it would perhaps be rash to identify it with a *ὀρμίσκος χρυσὸς* recorded among the treasures of the Eleusinian goddesses in *I.G.*, I², 317, line 6 (*ca.* 410 B.C. ?), although we know that several objects from their sanctuary were transferred to the Hekatompedon early in the fourth century B.C.⁵⁵

Line 28: The last letter preserved seems definitely, from the photograph, to be T, which might justify the restoration *οἱ ταμίαι οἱ τ[ὼν ἄλλων θεῶν]*, referring to some other act of transference ante-dating the abolition of that board.

Line 29: I am no less baffled than Meritt by the letters PABA ..ΤΟΙ, as neither *-πα]ραβα. .το* nor *-ρ' ἄβα. .το* nor *-ρα βα. .το* seems to give any possible sense. I can only suggest that if the second A is conceivably an engraver's error for Δ we might read *ῥαβ<δ>[ισ]τοί* (or *-τόν*), an unknown variant, with presumably a somewhat different sense, for *ῥαβδωτός*.⁵⁶

Line 32: Surely not *ῥαλον χ-* but *[φ]ύλλον χ[ρυσόν]*.

Line 35: For Meritt's suggestion *[-ε]πὶ Να[υσιγέ]νους ἄρχοντος (?)* I should prefer to read *πίνα[ξ]* or *πίνα[κες]*, as it seems improbable that even if the gold crown dedicated in the year of Nausigenes (368/7 B.C.) were still in existence it would have been entered at such a late place in this list; and we know of no other votive object which is described as belonging to his year.

III

I.G., II², 1686, etc.

In his publication of newly-discovered, or newly-identified, fragments of *I.G.*, II², 1686 (*Hesperia*, XI, 1942, pp. 275-278), Meritt did not include the interesting fragment published under the number *I.G.*, I², 303, although Wade-Gery had (cor-

⁵⁵ Cf. West-Woodward, *J.H.S.*, LVIII, 1938, p. 70. Some of the silver *φιάλαι* transferred from Eleusis in 400/399 are listed in the fragment added to *I.G.*, II², 1375 by E. Schweigert, *Hesperia*, VII, 1938, pp. 274 f., no. 9. It should be noted that this *ὀρμίσκος*, which is recorded as among the treasures of the *Ἐλευσίνιον ἐν ἄστει*, is entered, by a curious change of name, as a *ὑποδερὶς* in *I.G.*, I², 313 and 314, of the years 408/7 and 407/6 respectively. Its position in each list, in association with a silver *φιάλη*, leaves no doubt on the point; and the fact of its repetition in two successive lists as a *ὑποδερὶς* seems to indicate that I², 317, where it is called an *ὀρμίσκος*, must be dated earlier than 408/7 B.C.

⁵⁶ The word *ῥαβδιστός*, apparently unknown hitherto, is a natural adjectival formation from *ῥαβδίζειν* (cf. *ῥαβδισμός* and *ῥαβδιστής*), and might be used to denote an object fitted to a rod, as distinct from *ῥαβδωτός*, meaning "fluted." For such an object we may compare an item in the Asklepion-inventory, *I.G.*, II², 1534, line 103, *ῥαβδίῳ ἡρτημένος ἀργυρίῳ*.

rectly, as I believe) attributed it to the same stele.⁵⁷ With this addition, and including the two fragments of *I.G.*, II², 1687 which Meritt assigns to it in the same article, we now have a total of ten pieces attributed to this document, but without a certain join between any two of these pieces. They may be listed as follows:

I.G., II², 1686*a* and *b* (Pl. 33)

Meritt, *Hesperia*, XI, 1942, pp. 275 ff., No. 52, *c* (= Agora I 2982) and *d* (= E.M. 3032)

Meritt, *loc. cit.*, No. 52, *e* (= Broneer, *Hesperia*, IV, 1935, pp. 165-166, no. 26)

Meritt, *loc. cit.*, No. 52, *f* (= Agora I 2486 *b*) and "Face B, *b*" (= Agora I 2486)

I.G., I², 303 (Pl. 33)

I.G., II², 1687*a* and *b* (Pl. 33)

Even now there is no certain clue to the original width or height of the stele, and in all too many passages it is impossible to restore continuous sense; but to justify a return to this subject I offer a few restorations for some of the additional fragments, and I would suggest that the relative positions of most of those belonging to Face *A* of II², 1686 can be approximately indicated. In the light of these suggestions the problem of the original width of the stele can be approached with more confidence.

1). There can be no doubt that the smaller piece, 1686*Ab* (Pl. 33), is wrongly placed in the *Corpus* as coming below the main piece, *a*. Ferguson accepted this position for it,⁵⁸ unfortunately overlooking the facts that it is broken, and not, as he thought, blank at the back, and that there is definitely a blank space at the foot of *a*. Dinsmoor⁵⁹ drew attention to this mistake, and Meritt accepts the correction, adding that in any attempted reconstruction *b* should probably be placed above *a*. I do not feel quite certain that it might not possibly be combined with *a*, though I cannot offer a satisfactory restoration to confirm this, since a possible reading in line 32 (= *b*, line 7) would give us the mention of the same prytany (*Αἰαντῖς*) as in *a*, line 21. The former line is printed in the *Corpus* as ἐπὶ τῆς — —]τίδος πρυτανε[ίας — — ς πρυτανευόσης—, but there is visible both on the stone and on the photograph the somewhat worn apex of an *alpha* centered under the *A* in the line above. The *nu* is entirely lost by damage to the surface, but we can thus reduce the possible restorations for the name of the tribe to [*Αἰ*]α[*ν*]τίδος or [*Ἀκαμ*]α[*ν*]τίδος; at the end of the line, moreover, as the letters *NE* are lost we must read *πρυτα[νείας]* for *πρυτανε[ίας]*.

Before we turn to the implications of the restoration of either of these names for the prytanizing tribe, certain other improvements must be noted for the text as given in the *Corpus*:—

⁵⁷ *J.H.S.*, LIII, 1933, pp. 136 *ad fin.*

⁵⁸ *The Treasurers of Athena*, p. 78.

⁵⁹ *Harv. Stud. Class. Phil.*, Suppl. Vol. I (Ferguson), p. 171.

Line 2: For O H, read O ι T . . N Η Η; above the first H is A, the only letter surviving from line 1.

Line 3: For A I ⁹ . . Φ Λ Λ . E read A Γ . A Φ Λ A Γ E.

Line 4: For I . ἀπὸ τῶ[ν— read T O A Γ O T Ω[N (?)—

Line 6. For ANXX, κ.τ.λ. read σύμ]παν XX, κ.τ.λ.

Line 7: (*v. supra*)

Line 9: As the first and last letters are doubtful, read το]ύτων οἱ ἐξαχ[θέντες

Line 13: Under the second E of line 12 is P (or possibly B).

For line 2 the restoration σταθμὸν τ]ούτ[οι]ν ΗΗ— is reasonably certain, and we may with some confidence suggest that it refers to a pair of votive phialai.

In line 3 ἄγ[ρ]αφα A Γ E (or A Γ E), giving us either ἀ Πε[— — ἀνέθηκεν, or ἄγε[ι ἔκαστον (?)— —.

In line 4 possibly ἀργύριον ἐγένε]το ἀπὸ τῶ[ν φιαλῶν(?)].

Lines 5-6. κεφάλαι[ο]ν τῶμ [παραδοθέντων, as in 1686B, lines 61-62, this total being followed in line 6 by the total of all receipts for the prytany, — — κεφάλαιον σύμ]παν (= 3470(+) drachmai).

With line 7 we obviously have the beginning of the accounts of a new prytany, and if we accept the reading [Aι]α[ν]τίδος this must be the same prytany for which we have, presumably, the total in *a*, lines 21-22; but it is not possible, in this case, to decide at what point in the latter we should look for the beginning of the entries for this prytany.

If, however, we restore the tribe as [Ἀκαμ]α[ν]τίδος, we should have to put this piece above *a*; and with Akamantis as the fifth prytany, Aiantis would become the sixth, and Antiochis, as we shall see later, the seventh. Later than this is could not be placed, since there is clear evidence on Face *B* for three prytanies at least, the first (unnamed) covered by lines 39-50, the second (Hippothontis) by lines 51-63, and the third (implied by the use of the word *παρέδομεν*), by lines 63 to the end. Whether the new fragment, Face *B*, *b*, indicates that yet another prytany followed, will be considered later; but in any case so much is missing from above on this face that it cannot have contained the accounts of less than four prytanies in all which would imply that the accounts of Antiochis were continued from Face *A*. On the whole, then, it seems preferable to assign the sixth prytany to Aiantis and the fifth to Akamantis, restoring [Ἀκαμ]α[ν]τίδος in line 7 of our fragment *b*.

2) As Meritt's fragment *c* must be located low down on Face *A*, it is more appropriate to deal first with the fragments which belong higher up on this face of

the stele. To begin with *I.G.*, I², 303 (Pl. 33), the version printed in the *Corpus* is far from satisfactory, for it omits to indicate that traces of no less than five lines can be deciphered after line 7. The surface here is much damaged and its condition strikingly resembles that of the upper portion of fragment *b* which we have just dealt with.⁶⁰ After prolonged study both of the stone and of a squeeze, I would transcribe the text as follows:

<Ι?Ι
 ΙΙΗΗΙC
 ΡΗΘΙΩΝΚΑΙ
 ΝΤΤΤΧΧΗΑΠ
 5 □ΕΛΛΗΝΟΤ
 ΣΙΝΙΠΠΟΚ
 ΞΤΡΑΤΟΙΑC
 ΑΞΕ
 ΑΧ ΙΔΟ
 10 Ε Α
 ΗΔ
 Η:Δ

Line 1: This can hardly be restored as anything but — *ς* *πρὺ*[*τανε* — —, as the *hasta* surviving from the second letter is set distinctly to the left of its chequer; but whether we have a noun or a participle cannot be decided.

Line 2: The numeral ends in —9 drachmai, 1½ obols.

Line 3: Presumably a dedication by the islanders of Peparethos and a neighbour. Such an offering, distinguished by the name of the state which made it, was surely a crown, and following *καὶ* must have come the name of the joint donors. A possible clue to their identity is to be found in *I.G.*, I², 124, the remains of a decree of 406/5 B.C., above which is a relief showing Athena giving her hand to a bearded man, to whom the word Ἰκιος is appended. If this is a proxeny-decree, as seems likely, it was presumably passed in favour of a prominent citizen of the island of Ikos, which may well have dedicated a crown to Athena together with its better-known neighbour, Peparethos. This would permit us to restore here [*στέφανον τὸν ἀνατεθέντα ὑπὸ Πεπα-ρῆθίων καὶ Ἰκίων*], and might well point to the conclusion that the item in line 2, of which the weight ends in 9 drachmai, 1½ obols was likewise a crown, seeing that it is

⁶⁰ But there can be no possibility of placing them close together, owing to the difference in the lettering, as well as in the spacing of the lines. In fact it would appear that I², 303 was the work of a different stone-cutter from the man who cut 1686, and must therefore be placed near the top of the stele.

most unusual to find votive offerings other than crowns (apart from small objects such as rings) of which the weight is recorded as ending in a fraction such as $1\frac{1}{2}$ obols.

Line 4: It is not clear whether the sum of 3 talents, 2115(+) drachmai is the total weight of some large group of objects, or of the entire receipts of the prytany concerned; in the latter event [κεφάλαιον σύμπα]ν would be the natural restoration, and this seems preferable, since the mention of the Hellenotamiai in the following line seems to point to the first transaction of a new prytany. Even if we assume that they received some payment (from the Treasurers of Athena), we cannot restore lines 4 and 5 so as to read Ἐλληνοτ[αμίαις παρέδομεν τῶι δέϊνι (demotic) καὶ συνάρχῳ]σιν Ἴπποκ — as this would give us a much shorter line than is required for our stele.

Line 7: The reading in the *Corpus στρατ[ηγ]ο[ῖς]* — does not agree with traces visible on the stone, and I believe that, as my copy indicates, we have a name in the dative, *e. g.* [Καλλι]στράτωι, followed by his demotic, which might begin either with ΑΦ (*e. g.* Ἀφ[ιδναίωι]), or with ΛΟ (*e. g.* Λο[υσιεῖ]).

Nothing of value can be gleaned from lines 8-12, though the faint traces in line 9 would be consistent with Ἀχ[ε]ρδρό[σιος (or -σίωι)], and in line 11 two drachma-signs followed by *delta* (?), and perhaps more numerals in line 12, may indicate the weights of objects handed over for melting.

There is nothing in all this to suggest that this fragment could be directly associated with any other portion of 1686*A*, and our only possible clue to its position is afforded by the fact that if, as I have tried to show, the accounts of a new prytany begin in line 5, we cannot combine it with fragment *e* (no. 4, below), which appears to make mention of the third prytany, and is, moreover, characterised by a different style of writing. If this change of hand marks the beginning of the accounts of the third prytany, our fragment must relate to the end of the first and the beginning of the second.

3) Fragment *d* (E.M. 3032). Meritt's suggestion that the mention of a pair of silver phialai in line 4 indicates that this should be associated somehow with lines 3-7 of 1686*A* is attractive, but the different style of the lettering is an obstacle, and it might be wiser to assign it to a place higher up on the stele, in the first or second prytany, where similar objects may well have been recorded. I can only add a few notes based on a careful study of the photograph which he reproduces. Thus, in line 1 the four letters partly preserved seem to be ΙΝΙΠ, for which we might restore either [Φα]ινιπ[πο, as in line 12 of 1686*A*, or perhaps [καὶ συνάρχῳ]ν Ἴπ[ποκ — as in line 6 of I², 303, above. In line 2 we may very likely have the names of two dedicators of one or more phialai, — καὶ Ἴερο —, with several alternatives for the completion of the second name. In line 3, after ΕΝΗΞ there seems to be the apex of Α, presumably [Ἀ.]νέθηκεν rather than the demotic of the dedicator — ἐνης. For the dedication

of a pair of phialai cf. 1686*A*, line 6 as well as that suggested above for line 2 of 1686*Ab*.

4) The ingenious restoration proposed by Broneer, on the assumption that this fragment was to be compared with *I.G.*, I², 296/8 and 302 is not valid, now that it has been identified by Meritt (and accepted by Dinsmoor)⁶¹ as part of our stele (fragment *c*). From the evidence of the writing this seems unquestionable. Omitting Broneer's restorations we may transcribe this fragment as follows:

----- ω -----
 [-- καὶ συ]νάρχ[οντες (?)-----]
 [--- παρέ]δοσαν -----
 [--- ἐβδό]μει κα[ὶ δεκάτει (?) τῆς πρυτανείας]
 5 [-- ἰδος τ]ρίτης [πρυτανευόσης -----]
 ----- ΧΧ| -----
 [---- ἀργ]υρί[ο -----]

The readings are free from doubt in lines 1-4, but in line 5 it is not clear from the photograph that the first letter was certainly Π, and the surviving traces which it shows might equally well point to Γ (or Ε?). In line 6 the *hasta*, though centrally spaced, might perhaps belong to Η or Ι (rather than Π) if the figures are not strictly *stoichedon* in relation to the lines above and below. Apart from an uncertain date in line 4, where δεκάτει is merely conjectural, and, if we accept the *rho* in line 5, the holding of the third prytany by some unidentified tribe, this adds little to our knowledge. If however we decide to read Γ for Π we can only restore ἐ]πὶ τῆς[-- ἰδος πρυτανείας], giving us no clue to the position of this fragment in the record of any prytany from the third onwards.

In line 3 the use of [παρέ]δοσαν (contrast [πα]ρέδομεν, 1686*B*, lines 63-64) seems to point to a twofold transaction, whereby the recipients of certain objects handed them over to a second body, which would agree with the inference drawn by Ferguson⁶² from the close juxtaposition of the words Epistatai and Hellenotamiai in 1686*A*, lines 10-11.

5) The transcript of fragment *f* calls for little comment: in line 1 it would appear from the photograph that the Ο had been followed by ΞΙ (unless these marks are merely discoloured surface-injuries), and the latter stroke, by its position might belong to Η or Γ; the former would permit us to restore πρυτανευ]όση[ς]. No further restorations seem feasible in lines 2-5, but an alternative grouping of the letters in line 6 would give us -ο Κλεισθ[έν -, for -οκλεί Σθ[ενο ----- suggested by Meritt,

⁶¹ *Op. cit.*, p. 171; his suggestion that this may include part of the prescript is mistaken.

⁶² *Treasurers*, p. 78.

and might indicate a dedication, — — ὁ Κλεισθ[ένης — — ἀνέθηκεν]. In favour of Meritt's division of the letters we should note the wide space after the *iota*, which is set well to the left of center, but against this is the fact that no Attic name beginning Σθενο— (and they are far from common), seems to be known before the latter half of the fourth century B.C. It is perhaps also worth noting that neither of the items recorded in lines 3-4 — — οὐν δυοῖν and — — ν ἐπαργυρ — — can be recognized among the contents of the Pronaos, or the Parthenon, or the Hekatompedon in the inventories from 434 B.C. onwards.

6) Fragment *c*, as Meritt observed, certainly looks as if it should be associated with 1686*Aa* at some point between lines 18 and 26, and the only evidence to guide us is given by the words Ἀντιο[χίδος π[ρυταν — — in line 4. Seeing that in line 21 of *a* we have ἐπὶ τῇ]ς Αἰαντίδος, followed not by πρυτανείας but by χρ[υσίο(?)], which seems to point to a total for the prytany, the new piece must surely be placed so that line 4 comes after line 21 of *a*. This suggestion gains support also from the recurrence of the curious words ἐλήφθη ἔχων ο οὐ — — in line 3 here and in *a*, line 23, as Meritt recognized. In each case, I have no doubt that we should restore ὁ]ς (or ᾧ]ς) ἐλήφθη ἔχων ὁ οὐ[κότης, as the only possible explanation of the letters ΟΟΙ in line 3. Apparently a dishonest slave was arrested in possession of two separate lots of stolen property, presumably from two different sources, and we may well believe that it was money rather than other valuables which he stole. This would enable us also to bring into the same context the letters ΛΞΤΟΣ in line 5, for which Meritt's suggestion στατήρ]ας τὸς might be appropriately continued with the words ἐκ τῶ Ὀπισθοδόμο, since that would be the natural place for their safe-keeping.⁶³

Nevertheless, it seems impossible to find a restoration which will give a satisfactory connection with the main fragment, since the combination of line 4 with line 22 of *A*, though tempting at first sight, so as to read [ἐπὶ τῆς Ἀντιο]χίδος π[ρυτανείας ἔκτης (?) πρυτα]νεύσεως leads to insuperable difficulties in the restoration of the other lines. One point, however, seems clearly established, namely that the prytany of Antiochis followed immediately after that of Aiantis.

7) The closer spacing of the lines, which convinced Meritt that his "fragment *b* of the reverse" should be located below the larger piece, is accompanied by straggling and untidy lettering, not unlike that of II², 1687*b*. As it is clear from the photograph that at least two lines have been obliterated at the top by surface-injury, we cannot tell whether, after this gap, it directly continued the last lines of the main fragment, but there is nothing in its contents to make this impossible. In fact, if the presence of [πα]ρέδομεν in 1686*B*, lines 63-64 proves that this is the beginning of a new prytany-account, followed in the next two lines by payments made in the early days of this prytany, we may accept the close connection of the two pieces as extremely probable.

⁶³ Compare *I.G.*, I², 305, lines 13 ff. for the disbursement of Cyzicene staters from this source.

Turning to the days of the prytany recorded in the new fragment, it is reasonably certain that we should restore ἐν]άτῃ κα[ὶ δεκάτῃ in line 1, and τ]ετάρτῃ[ι καὶ εἰκοστῇ in line 2, since πέμπτῃ[ι in line 6 can only be completed as πέμπτῃ[ι καὶ τριακοστῇ], in view of the almost certain restoration of lines 6-7 as κεφάλαι[ο]ν τῶμ[εν] [παραδοθέντων, introducing the total of the payments made during the prytany, one item of which was the νο[μ]ισμ[α] – in lines 7-8. And we need not hesitate to restore [τῇ αὐτῇ] | ἡμέραι in lines 4-5, comparing *I.G.*, I², 301, lines 20-21 and 304, line 23.

There is nothing to indicate whether the words τῆς πρυτανείας followed the ordinal numerals in lines 1-6; but reference to the main fragment (*B*) shows that in the prytany covered by lines 3-12 these words are omitted in line 5 after ἐβδ] | ὅμει which is followed by a numeral, Δ. ; and again in lines 13-25 they are inserted as far as the sixth day, inclusive, whilst we find that they are omitted after – – δ] | ἐκάτει in line 18. This would justify us in recognizing the same formula in lines 27 and 28 (confirming the view that we have here two of the early payments in a new prytany), and in omitting the words from a restoration of our new fragment. As none of the lines give us any indication as to the recipients of the various payments, and we have only the remains of one small sum recorded in line 4, where we should presumably restore [– – παρέδο] | μ] ἐν ΗΔΔΔ – –, it seems unnecessary to set out a restoration incorporating the suggestions put forward above. It only remains to add that if the letters ΟΞΗ in line 9 should be completed as [πρυτανεὺ] | ὅση[ς], this might point to the beginning of the accounts of a new prytany, which, in this case, could hardly be any but the tenth; but in view of the uncertainty of the restoration, the point had better be left undecided.

8) It seems appropriate at this point to consider some points in connection with the restoration of Face *B*. When Ferguson acutely deduced the date of this document, and drew attention to the evidence from lines 45-50 for a distribution of grain, both barley and wheat, to the beleaguered Athenians during the siege, he claimed that there was evidence for its distribution “during each of at least three (consecutive ?) prytanies,” adding “Instead of money these officials (*i. e.* the *Tamiai*) now doled out grain.”⁶⁴ But, unfortunately, he jumped too hastily to the conclusion that because distributions of grain are mentioned specifically in two passages relating to the same prytany, therefore all subsequent payments in this and the two following prytanies were also made in grain. Thus, when he speaks of amounts ranging “from a few tens of medimni to 4510–” and adds “On one day the (*Tamiai*) handed over 314 medimni, one hekteus of barley and an unknown quantity of wheat,” I would point out that neither of these assertions is correct. In the first place, it must be admitted that the only definite distributions of grain are those which are so described, [κριθῶν μεδίμνος – –] | ἐκτέα· πυρῶν μεδ[ίμνος – –], in lines 45-46, and [κριθῶν μέδιμν] | οι ΗΗΗΔΙΙΙΙ ἐκτεύς· πυ[ρῶν

⁶⁴ *Op. cit.*, pp. 82 f.

μέδιμνοι – –], in lines 49-50. We must conclude that other entries, where this detailed description of the nature and amount of the grain distributed does not appear, and a sum directly follows a date, *e. g.* – – κα] | ἰ εἰκοστῇ ΠΗΗΗΗ, lines 46-47, must represent sums of money. By no possibility could the sum ending in 4½ obols (IIIC) in line 55 represent measures of grain any more than that ending with three drachma-signs in line 56. Moreover, as Ferguson himself recognized, the details of the total for the following prytany include a payment in silver (ἀργυρίο – –), in line 63; but he failed to realize the implications of this entry for the previous prytany.⁶⁵

The other point of importance is the fact that individual distributions of grain are recorded in the accusative, as the object of παρέδομεν (*e. g.* ἐκτέα, line 46), so when we find the nominative ἐκτεύς (line 50) it is used as being an item in a total, introduced by κεφάλαιον. For this reason I have substituted μεδίμνος for μέδιμνοι as printed in the *Corpus*, lines 45-46. It is quite possible that other entries under this prytany, if preserved, would show that the total of 314 medimnoi of barley represented more than one distribution, and even in the following prytany, though the five sums wholly or partly preserved must all represent payments of money, there may also have been distributions of grain, for which the surviving portion of the text affords no evidence whatsoever.

I am glad to see that Meritt recognized that in 1686*A*, lines 19-26 the restoration στατήρες, which I had mistakenly proposed many years ago,⁶⁶ should be altered to στατήρας, on the analogy of 1687, line 5, but this is not true for line 26, where the nominative must be retained, following [κεφάλαιον σύμ]παν.

9, 10) In considering the possible relationship of II², 1687 to 1686, we must not omit to notice that in 1687*a* the final lines of each paragraph do not reach to the right-hand edge of the stone, and that a line is left blank, apparently, between each paragraph; and further, that the entries represent payments recorded under days of a prytany. On *b*, on the other hand, we seem to have a series of totals, classified according to the currency in which they were paid, with each line extending over the whole width of the stele (if we may judge from the evidence of the first two lines).

But this is not the only point of difference between 1687*a* and *b* and also between the former and 1686, for a more serious obstacle against assigning 1687*a* to the same stele as 1686 or 1687*b* consists in the different horizontal spacing of the letters: in 1686*A* the width of ten letters over all (*e. g.* line 23, from the center of the first letter preserved, ξ, to that of the eleventh, Ν) is 0.103 m., and on Face *B* the average width of any ten letters is almost exactly 0.106 m., whereas in 1687*a*, line 6 where we can measure the same number of letters with sufficient exactness the width is only 0.096

⁶⁵ Ferguson's notion of a distribution of grain on one occasion to the δικαστήριον (line 60) becomes less fanciful if we restore it as a sum of money paid for the Dikasts' fees, –ε] | τὸ δικασ-τ[ικόν]; perhaps there were other similar entries on the missing part of the stele.

⁶⁶ *J.H.S.*, XXXIV, 1914, p. 287.

m.; in 1687*b* the width of six letters (the maximum number measurable) is 0.059 m., as compared with 0.057 m. on *a* and an average of 0.06 m. on 1686*A*. On the whole it seems improbable that 1687*a* with its arrangement by paragraphs and an appreciably more crowded horizontal setting of the letters could be associated with either face of 1686, and it would be more prudent to reject the connection.

For 1687*b* the balance of evidence is less adverse: the lettering is surely the work of the same hand as on 1686*A* and *B*; we may note the typical *phi* with the vertical stroke not continued through the loop (cf. 1686*A*, lines 8, 15, 23; *B*, line 14); the tendency for the top stroke of *tau* to be slightly tilted in one or other direction, and for *alpha* to lean over slightly to the right.⁶⁷

As none of these details are equally conspicuous in 1687*a*, where, moreover, the *omikron* is distinctly smaller in proportion to the other letters than in 1686 or 1687*b*, this may well point to the work of a different engraver—an additional reason for dissociating it from 1686 and 1687*b*. If we are justified in connecting the latter piece with 1686 it would go more suitably with Face *A*, with its closer horizontal spacing, and belong near the lower left-hand corner of the stele, being separated from the last line of the main piece by a blank space of at least 0.035 m.; and we should have to assume that there was a slightly closer horizontal spacing at the beginning of the lines of Face *A* than we find towards the end. It is not, however, impossible that this summation of the totals of currency-payments on this face of the stele was not engraved in a strictly stoichedon-arrangement in relation to the body of the text.

Before leaving the subject of II², 1687 it must be noted that in the text of *a* as printed in the *Corpus* the position of the right-hand margin is incorrectly indicated, and that in fact there are the remains of an additional letter at the end of each of lines 3, 5 and 7 (lines 5, 7, and 9 below). It should be transcribed as follows:

		..Γ...
	[----- στατηήρας Κυζ]ικην[ὁ χ]	
	[ρυσίο-----]	(vacat)
		(vacat)
5	[----- καὶ συνάρ]χοσιν ἐπὶ τ	
	[ῆς -- ἰδος ----- ηι τῆς πρ]υτανείας (v)	
	[----- στ]ατηήρας Ἀττι	
	[κὼ χρυσίο-----]	(vacat)
	----- ηι τῆς πρυταν	
10	[είας-----]	(vacat)
		(vacat)

⁶⁷ These characteristics are also to be recognized in *I.G.*, II², 1370+1371+1384, 1373, 1383, 1399 and in the new fragment of the Opisthodomos inventory, *Hesperia* VII, 1938, pp. 272 f., no. 7, all, I believe, engraved by the same hand.

[----- ἀργ]υρι καὶ χρυσ[ί]
 [ο----- στατήρας Κυζι]κηνὸ χρυσί[ο.]
 ----- ΤΤΤΤΤΠΗΗΠ . .
 15 [----- πέ]ντε-----

In line 5 the remains of the first surviving letter seem to indicate X rather than Ξ, giving us the obvious restoration — καὶ συνάρ]χοσιν, and in line 14 the first letter was almost certainly T and not Π.

In 1687*b*, line 1, κεφάλαι[ον] is certain, and in line 3 the stone shows Δαρεικὸ X, pointing to the restoration Δαρεικὸ χ[ρυσίῳ στατήρες —], giving us the same order of words as in the record of the ταμίαι τῶν ἄλλων θεῶν (*I.G.*, I², 310, lines 103, 177). Following the word κεφάλαιον in line 1 the nominative στατήρες must be restored not only in line 1 but also in lines 2 and 4. If objection is raised to the mention of Attic gold staters in line 4 as well as in line 2, we might satisfactorily restore in the latter χρυσίῳ ἀ[σῆμο —] for Ἄ[ττικῷ], which gains support from the absence of any trace on the stone of the cross-bar of the T for which there is available space at the extreme lower right-hand corner, whereas Ξ may have all been lost by the breakage of the stone.

It will have become obvious that none of the newly-added fragments helps effectively towards establishing the exact length of the lines on either face of the stele. Ferguson suggested that about six-sevenths of Face A was lost, and as none of the surviving lines contains more than twelve letters (and most of them even less) he assumed that there were originally about 84 letters in each, supporting this with the statement that “normally the accounts of the Tamiae had about 84 letters to the line.”⁶⁸ The number is unlikely to have been much larger than this estimate, in view of the thickness of the stele, which is only 0.087 m. (say 3½ inches), and we have no very clear indication of its possible minimum width. There is, however, a clue which seems worth following in the remains of lines 2-6 of Face A, where we have a list of silver phialai, entered singly or in pairs, followed by the name of the dedicator and presumably by the weight of each. Whatever the exact formula was, it clearly required, either when used once or when repeated, approximately two letters less than the length of a line, with slight variations due to the difference in the length of the name of the dedicator, or of the weight, or of both. Experimenting with possible alternative formulae one finds that φιάλην ἀργυρᾶν ἦν ἀνέθηκεν, σταθμὸν ταύτης . . . ,

⁶⁸ *Op. cit.*, p. 79, note 1. The value of this support must not be unduly stressed, for of the six stelai with accounts of the Tamiae available for comparison, whilst *I.G.*, I², 296 has 84 letters to the line and 302 has 85, 293 (as restored by Meritt, *Ath. Financial Documents*, pp. 42 ff.) has 93; 297 has 78; 304*A* (non-stoichedon) has ca. 74-88; 304*B* has mostly 73-74; and 301 cannot be more precisely estimated than ca. 80. The length of line in the *Traditiones* of the Pronaos, Hekatompedon and Opisthodomos shows a much wider range.

allowing eight spaces for the name and three for the weight gives us 47 letters, which, with two entries to the line would give us 94—2(= 92) letters. The omission of *ταύτης* (twice) would reduce this to 80, whilst the insertion of two demotics, with *ταύτης* retained, would bring up our lines to an improbable length, appreciably exceeding 100 letters. It seems preferable to retain *ταύτης* on the analogy of the later fifth-century *Traditiones* and of those of the early fourth century, but it must not be overlooked that in the unidentified list which includes both phialai and golden Nikai (*I.G.*, I², 369 + 390a) the demotics of the dedicators are inserted, as well as the word *ταύτης*. Adopting the first suggestion, we might offer the following tentative restoration for lines 2-5:⁶⁹

(στ. ca. 92)

[.....⁵⁴..... φιάλην ἀργυρᾶν ἦν⁸..... ἀνέθηκεν,
σταθμὸν ταύτης ...· φιάλην ἀργ]υρ—
[ἂν ἦν⁶..... ἀνέθηκεν, σταθμὸν ταύτης ...· φιάλην ἀργυρᾶν ἦν⁶..... ἀνέθηκεν,
σταθμὸν ταύτης ...· φιάλην ἀργ]υρᾶν
[ἦν⁵..... ἀνέθηκεν, σταθμὸν ταύτης ...· φιάλην ἀργυρᾶν ἦν⁶..... ἀνέθηκεν σταθμὸν
ταύτης ...· φιάλην ἀργυ]ρᾶν ἦν.
5 [...⁷..... ἀνέθηκεν, σταθμὸν ταύτης ...· φιάλην ἀργυρᾶν ἦν⁷..... ἀνέθηκεν, σταθ—
μὸν ταύτης ...· φιάλην ἀργυ]ρᾶν ἦν
[...⁷..... ἀνέθηκεν, σταθμὸν ταύτης ...·⁴³.....
.....· φιάλα ἀργυρᾶ δ]ύο ὦ Καλ—
[λι — — ἀνέθηκεν, σταθμὸν τούτοις — —· (κ.τ.λ.)

It would be unprofitable to conjecture what might have been contained in line 7 to fill the gap before the words *ἐκ τοῦ Π]αρθενῶνος* at the end of the line, though quite possibly there was mention of the total number and weight of the silver phialai from the Parthenon as inventoried in the previous lines.

I have not thought it worth while to consider the alternative suggestion that each line contained the record of one phiale only, with an approximate length of 46 letters, for, although we cannot put forward any experimental restoration of any other lines of Face A on this reduced scale, we may conclude that it would be impracticable for Face B. In line 11, for instance, the natural restoration would seem to be *κεφάλαι]ον τῶμ παραδοθέντων [ν ἐπὶ τῆς — — ἰδος πρυτανείας — — ἡς πρυτανευόσης ἀργυρίου — —, κριθῶν μέδιμν]οι κ.τ.λ.* giving us not less than 75 letters, to which we have to add the weight of the silver currency which was presumably entered before the figures for the distribution of grain in this prytany, of which mention has been made above.

⁶⁹ Some of these *φιάλαι* may very well have weighed exactly 100 drachmai implying a proportionately longer name for the dedicator, but 102 drachmai is likely to be close to the average weight.

It remains to add that, if the suggested figure of approximately 92 letters is correct for Face *A*, we should expect that on Face *B*, with its appreciably wider horizontal spacing (0.106 m. : 0.103 m. for ten letters) there would be probably three letters less in each line, say *ca.* 89. For a stele of the width thus indicated, i. e. little less than a meter, we might expect the height to be at least one-third more, perhaps upwards of 1.30 m. If we take the average vertical spacing of ten lines as 0.130 m. this would give us room for 100 lines on each face, assuming that the stele was inscribed right down to the foot. As we have seen, this is not the case on Face *A*, where there is at any rate a vacant space of at least 0.035 m. between the last line of 1686*A* and the presumed summary of the totals on 1687*b*, which I would place below it; and there may have been a further blank space at the foot of the stele, possibly on Face *B* as well. From this evidence—for what it is worth—we may conclude that an estimate of 100 lines on each face might be somewhat excessive; but in any case this calculation will remind us how small a proportion of the original stele is represented by the surviving fragments, and how far we still are from solving all the problems which it raises.

A. M. WOODWARD

TUNBRIDGE WELLS
ENGLAND

STUDIES IN SOUTH ATTICA

COUNTRY ESTATES AT SOUNION

(PLATES 34-37)

I wish here to consider six ancient tower-like structures at Sounion, along with their outbuildings, and further, to establish their purpose and use by comparing them with similar structures elsewhere in the Greek world. The buildings themselves were studied, drawn,¹ and photographed before the war, and the present paper was envisioned years ago;² but the war itself, and, after it, other obligations which I deemed to hold priority have long delayed its appearance. In preparing the paper for publication, my mind has often turned back to the halcyon days I spent on that wind-swept Attic cape, and especially to the Terlakis family at Sounion, who were at once hosts, friends, and family to me. To them I should like to dedicate this paper.

Let us first consider these Sounion towers in the order that we come to them as we proceed northward from the cape into the inland part of the deme of Sounion.

1. THE PRINCESS TOWER (Fig. 1; Pl. 34, a-c).

The tower, with its outbuildings, stands upon a low neck of land jutting eastward between two branches of the lower Agrileza stream bed;³ it is close to the great ancient road which leads from Sounion to the north.⁴ The tower itself is circular in plan, its outer diameter five and a half meters. It is built throughout of local marble, with heavy blocks in courses on the outside, a lining of smaller stones within; the total thickness of the wall is just under a meter. Although little over a meter in height is preserved, the thickness of the wall and the remains of fallen blocks around it demand a much greater original height. The single door faces southeast toward the sea, and the doorposts, with carefully tooled faces and slightly drafted margins, are still in

¹ The plans of the towers show, in every case, the blocks of the highest course *completely preserved*.

² The field work was begun in 1938, when I was Norton Fellow of Harvard University at the American School of Classical Studies in Athens, and was completed in 1940-41, when I held a research fellowship from the School itself. My wife has assisted me in all stages of this task, both in the field and in preparation for the press. The first of these studies appeared in *Hesperia*, X, 1941, pp. 163 ff.

³ The place-names and locations at Sounion can be found in E. Curtius and J. Kaupert, *Karten von Attika*, Sheet XV.

⁴ A discussion of this and other roads at Sounion will appear in *Antiquity*, XXX, 1956; cf. *A.J.A.*, LIX, 1955, p. 175.

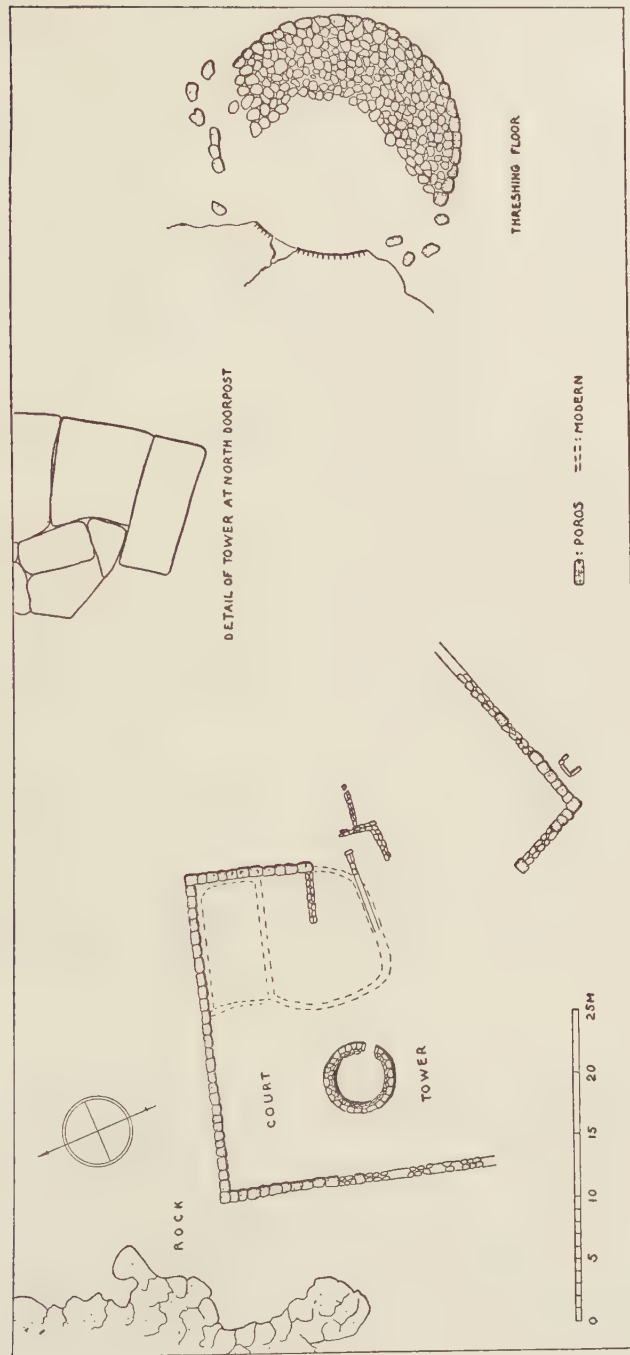


FIG. 1. The Princess Tower (Sounion 1).

place, while the massive lintel lies on the ground outside.⁵ In the springtime, the tower is a favorite haunt of shepherds, who perch upon its walls to watch their flocks and play their reed-pipes; they will still tell the passing stranger tales of the little princess who was imprisoned in this tower by her cruel father, whose Palace (the Temple of Poseidon) lies below on the cape.

The gleaming white tower is easily seen, but not so evident is the rectangular wall which surrounds it on all sides save the south (where it has toppled into the stream bed). This is built of heavy poros blocks, quarried on the site and held on a dry rubble foundation. The gate apparently lay at the northeast, where some haphazard modern construction may well overlay ancient building. To the southeast is part of another structure, oriented quite differently from the enclosure wall, but of precisely the same material and construction.

Farther east, at the end of the ridge, is a terraced and carefully paved circular platform nearly twenty meters in diameter, encircled at the east by a low rim of stones, at the west by careful cutting in the native rock.

How shall we reconstruct and explain this cluster of buildings? We must picture the tower rising many meters high, within a large rectangular courtyard containing other buildings, and at least one other structure outside. The circular platform is certainly an ancient threshing-floor, and there are numerous fragments of trachyte grindstones and hoppers scattered about. The buildings, then, seem to be connected in some way with ancient farming in the level valley below, which is sown to grain today by farmers from Keratea.

Without excavation, the date of construction cannot be surely established. Yet the great quantity of potsherds found on the site provides an approximate chronology. They represent two distinct periods: (a) the late fifth to fourth centuries B.C., and (b) the second and first centuries, perhaps extending into the first century after Christ.⁶ The quantity of later fifth-century sherds is so great as to prove occupation here by 450-425, and it seems likely that most of the structures now visible were built at that time.

2. THE CLIFF TOWER (Fig. 2; Pl. 35, a-b).

Continuing northward from the Princess Tower along the ancient road, we come to a point where the open glade suddenly narrows. On both sides of us are steep

⁵ The ruins were visited by Milchhoefer, at which time two "anta-like" projections could be seen on the inner face of the wall, opposite the door to left and right. These may have been the stubs of division-walls. See E. Curtius and J. Kaupert, *Karten von Attika*, Text III-VI, 1889, p. 29.

⁶ The dating of these and other sample sherd collections (most of them of coarse pottery) would have been quite impossible without the unrivalled groups of dated pottery in the storerooms of the excavations of the Athenian Agora. I should like to thank Professor Thompson, Professor Vanderpool, and Miss Talcott (as well as many others) for their never-failing help and hospitality.

slopes; to the west, the foothills of Megali Vigla cut back into sheer marble cliffs, and atop one of these stands our next tower. Time has dealt harshly with it; its wall stands today scarcely 70 centimeters high, and only its thickness (*ca.* 1.00 m.) shows the ambitious character of the original structure. It is again circular, 5.20 m. in diameter, built of rough blocks, both marble and schist, in very irregular courses. The doorway faces east and stumps of the doorposts are still in place. A wall extends north from

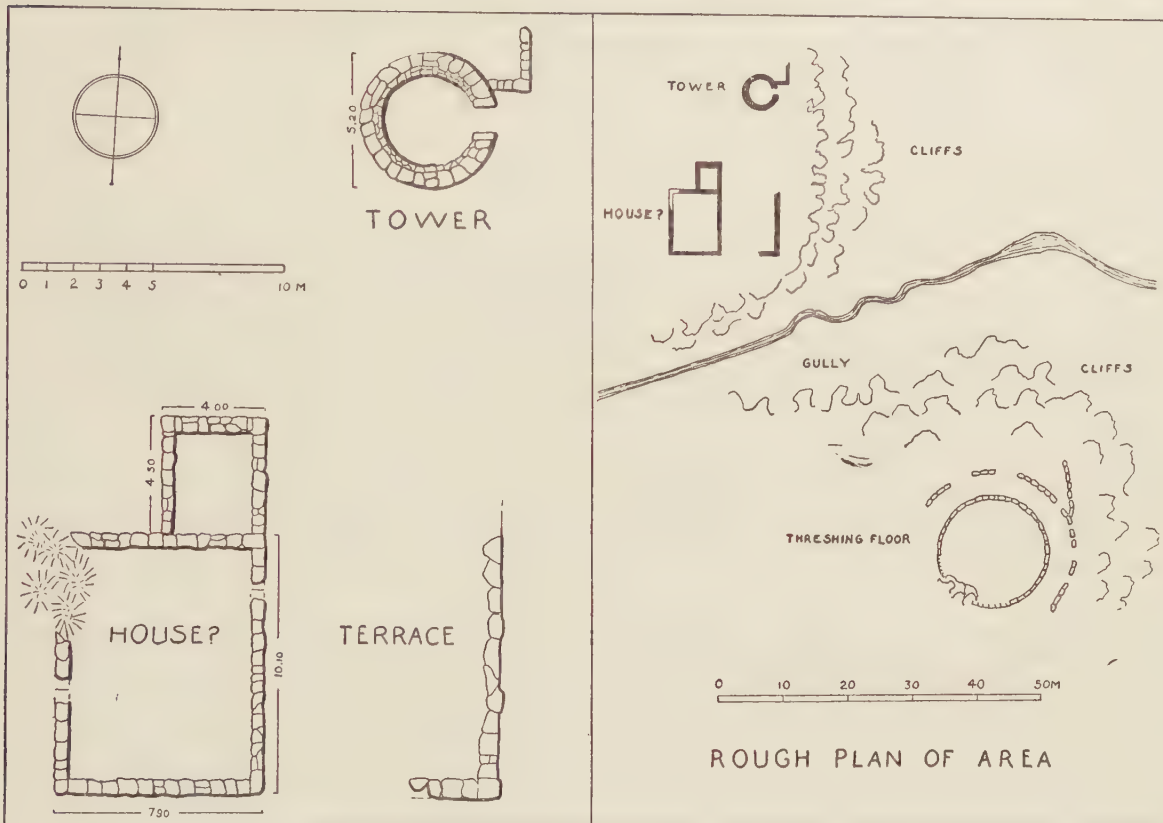


FIG. 2. The Cliff Tower (Sounion 2).

the doorway, but since it is not bonded to the tower wall, it is presumably a later addition. A modern hut to the north is built entirely of blocks removed from the tower; thus most of the destruction is fairly recent.

A few meters to the southwest of the tower, there are foundation-walls of a large rectangular building with a smaller addition to the north. No doorway can now be distinguished; it may have been at the west, where the remains are now obscured by a thick growth of gorse, but I should prefer to place it on the east side, where a terrace was built to level off the ground. Some distance to the southeast, across a narrow gully, there is a heavily terraced threshing-floor similar to the one at the Princess Tower.

Restored, the Cliff Tower would much resemble the Princess Tower, save that here, while there is no trace of a courtyard, the outlines of a house are clear; the terrace in front may well have been roofed with wattle to form a shady porch, as is common today on island farms. The threshing-floor was built with much effort, because of the difficult terrain, in a place open to both easterly and westerly winds, and thus ideal for its purpose.

Sherds are scarce here, for they are easily washed over the cliff by winter rains; all those found probably belong to the earlier part of the fourth century B.C., and to this period we may tentatively date the whole complex.

3. THE GOLDEN PIG TOWER ⁷ (Fig. 3; Pl. 35, c-d).

If we return once more to the ancient road and travel northward, we come to a place where the steepest slope is to the east, up the foothills of Mont Michel. A scramble up the hill brings us to a level space and Tower 3. This tower is rectangular, about six meters square; the maximum height of the wall now standing is 1.20 m. The walls are built in Scranton's "irregular Trapezoidal style," ⁸ with some very large blocks of both marble and poros, the interstices filled with smaller stones. The outer corners are carefully drafted. The face of one large marble block, unlike its companions, is decorated with three rows of vertical furrows, and may have originally been part of another structure. There is an inner lining of marble stones. The doorway, with remains of both doorposts, faces northward toward the upper town of Sounion.

Before the tower, extensive foundations of a rectangular enclosure can be traced for some distance; the northeast corner has been walled off to form a square building. Behind the tower, there is a rectangular shaft cut deep in the rock; it is too small for a mining shaft, and is probably an ancient well.

The few sherds found here, together with the style of building, suggest that the date of construction was the late fourth or early third century.

4. THE YELLOW TOWER (Fig. 4; Pl. 36, a-b).

Almost due west of the Golden Pig Tower, on the high tableland called Spitharopousi which overlooks the Legrana Valley, is our fourth tower. It is oblong in shape (6.60 x 4.10 m.) with walls 70 centimeters thick. The style of the outer walls is

⁷ The tower itself has been greatly damaged in recent times, and the area around it is pock-marked with freshly dug pits, revealing remains of ancient graves. These graves probably inspired the legend that the ubiquitous golden sow, with her golden piglets, was buried here. For her I have named this tower, although, as the destroyer of many ancient monuments, she hardly deserves the honor.

⁸ R. L. Scranton, *Greek Walls*, 1941, pp. 79 ff.

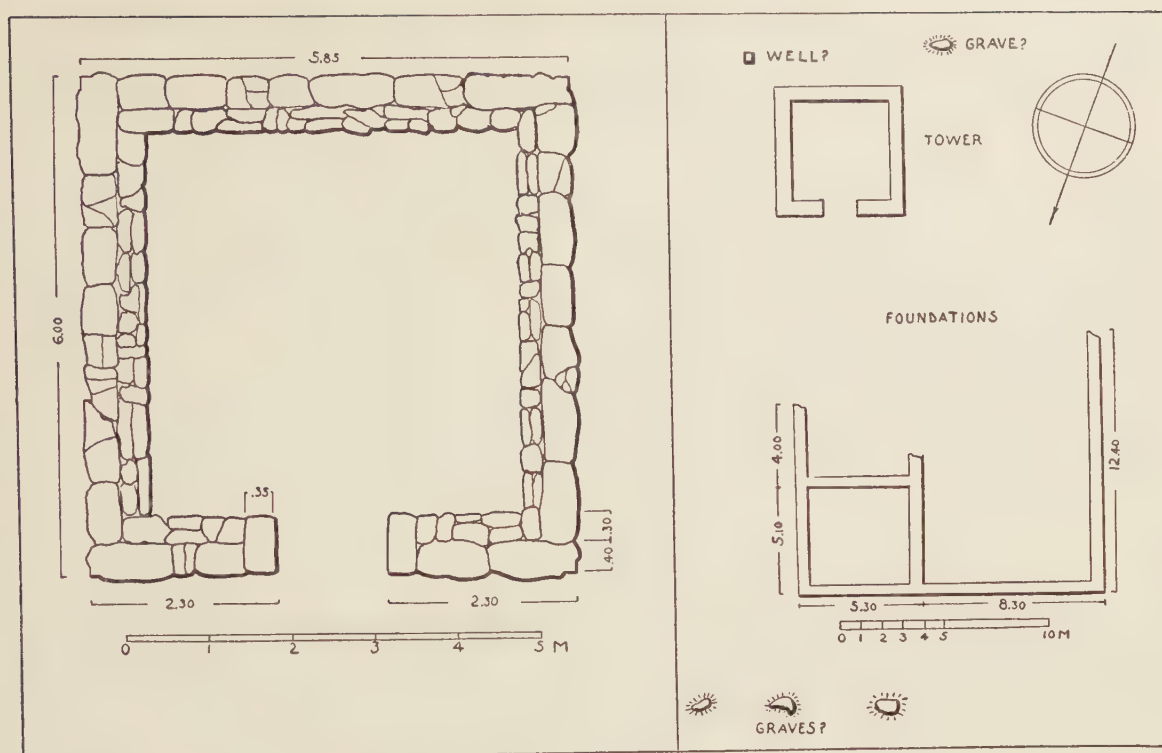


FIG. 3. The Golden Pig Tower (Sounion 3).

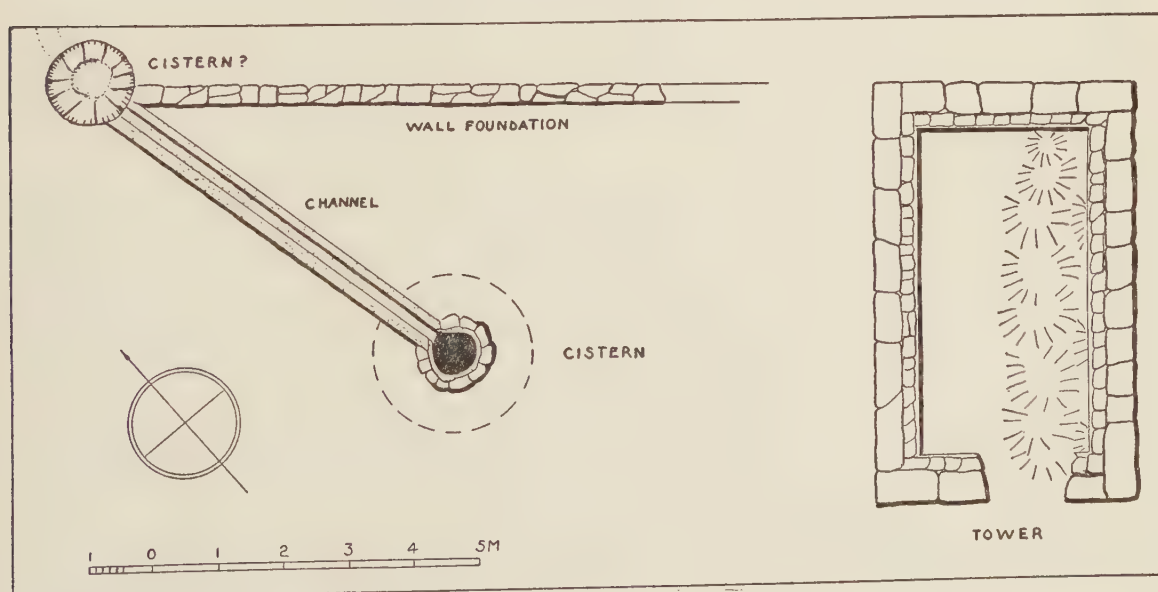


FIG. 4. The Yellow Tower (Sounion 4).

similar to that of the last tower, but the inside is lined with very small stones covered with a thin coat of yellow, muddy plaster. The wall is now somewhat less than a meter in height. The doorway must have been to the southwest, where the only opening appears.

To the northwest, in line with the back wall of the tower, rubble foundations for a wall extend as far as a depressed spot, which probably represents an ancient cistern, now filled in. From here, a built channel with cement lining leads back toward the tower and empties into a deep rock-cut cistern shaped roughly like a bottle. Such narrow-necked cisterns at Sounion were usually for drinking-water. Without clearing the sinking, it is hard to explain the function of the channel.

This tower is close to extensive ancient mining remains, yet it need have no connection with them. The sherds from the whole area are consistently of the fourth century B.C., but they belong with the mining-works rather than specifically with the tower.

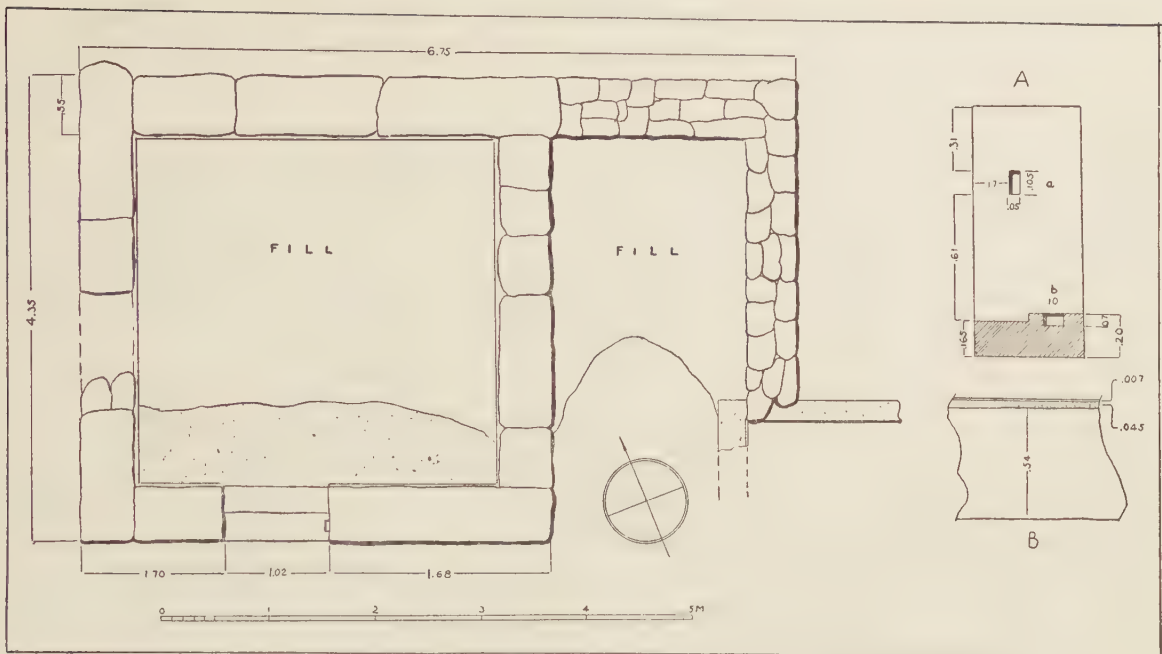
5. THE RED TOWER (Fig. 5; Pls. 36, c-d, 37, a-b).

Our fifth tower is deep in the hills of Agrileza, almost at the headwaters of the stream. It is almost square (4.35×4.40 m.), and built of a single thickness of very heavy blocks, 55 to 60 centimeters thick. The maximum preserved height is 1.18 m. The inner faces of the wall are coated with several layers of fine plaster, the surface of each coat painted deep red; these superimposed layers may well represent a considerable period of occupation. Most peculiar is a comparatively thick layer of earth packed between the undermost coat of plaster and the blocks of the wall (Fig. 5, B). Since it seems impossible that this could have been the first surfacing, perhaps it represents a layer of some perishable material used as backing for the first coat of plaster, which, as it vanished, was gradually replaced by earth. The floor shows traces of a thin coat of white cement.

The doorway faces southeast and its threshold block is still in place, the inner half of its top surface cut down 7 centimeters. There are no doorposts; the faces of the wall-blocks to left and right were smoothed down to hold the frame. On one of these is a cutting (Fig. 5, A, a), apparently for the bar of the door and at its base another cutting (Fig. 5, A, b), extending into the threshold block and presumably serving as a lock or catch—how, I cannot imagine.

After the tower was completed, a rectangular structure was added against the east wall. It is built of dry rubble, and could never have been more than one story high. The front has been torn away in recent times. The outer wall of this building at its south end was laid directly upon an earlier cemented wall.⁹

Sherds from around the Red Tower date from the fourth to the second century B.C.; perhaps the washing-table belongs to the fourth century, the tower to the third.



6. THE HILLTOP TOWER (Fig. 6; Pl. 37, c-d).

Due west across the valley from the Red Tower, and a little to the north on a pine-covered hill, stands the Hilltop Tower. It is again square, about 6.50 m. to a side. It is built of heavy roughly squared blocks of schist about 70 centimeters thick, laid in even courses. In some places these courses are preserved to a height of 1.80 m. The doorway faces south; as in the Red Tower, there were no monolithic doorposts.

The east corner of this tower is built directly upon a cemented settling-basin and channel, and these in turn are built hard against a large open cistern of roughly oval plan. Such structures are connected with the silver-mining industry, and it is evident that the tower was not built until they went out of use.

In front of the door, there is a flat terrace held back by a retaining wall. One might suppose that this formed a kind of porch similar to that in front of the house of the Cliff Tower. Perhaps it did, yet the outer face of the retaining wall is coated with hydraulic cement, which suggests that, whatever its possible re-use, it was originally connected with the mining-works.

A few sherds of the fifth and fourth centuries were found in the area, but it is

⁹ Probably part of a washing-table for extracting lead and silver ore, of a sort very common in the Sounion mining region. Cf. E. Ardaillon, *Les Mines de Laurion dans l'Antiquité*, 1897, pp. 63 ff.

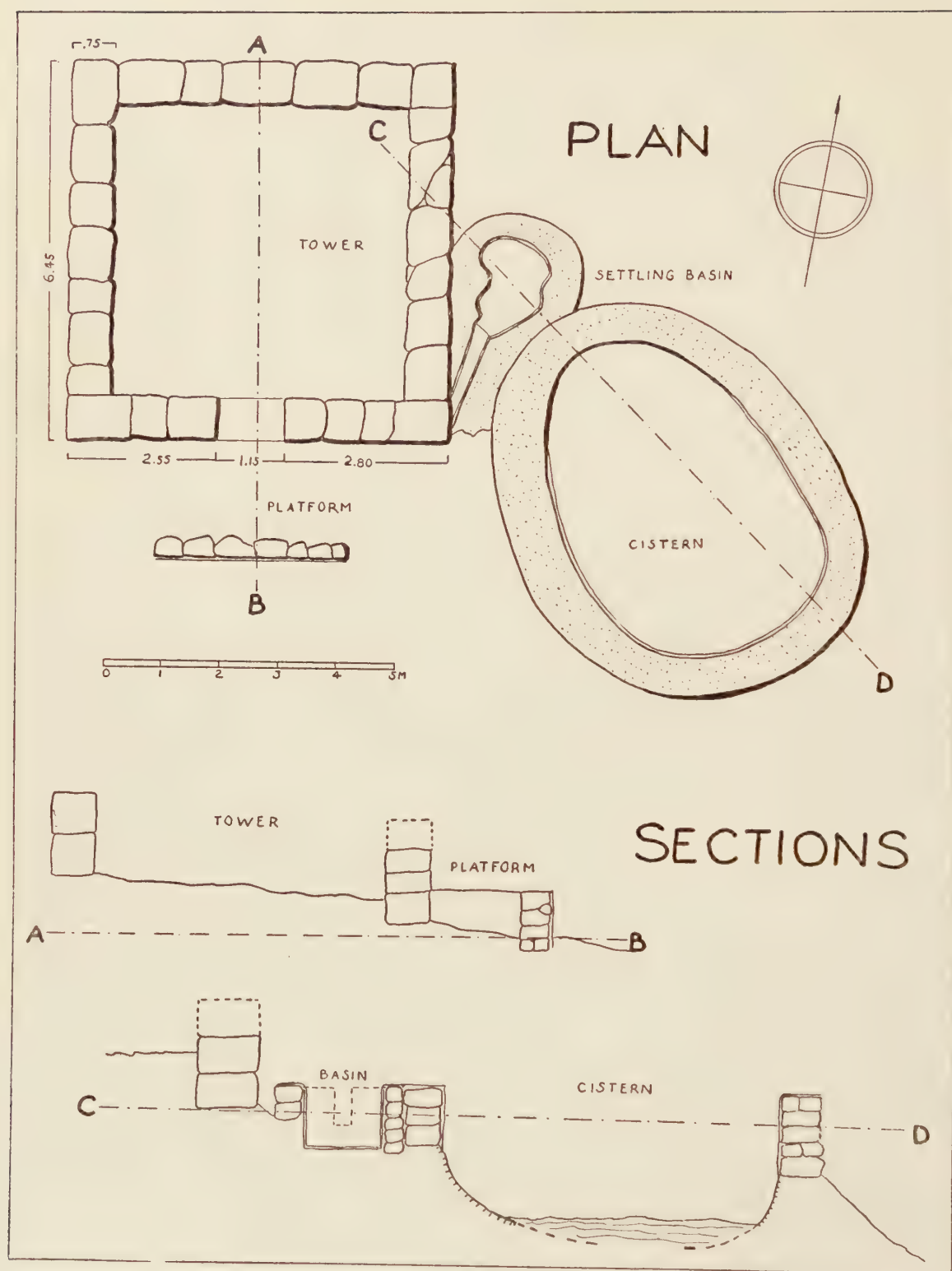


FIG. 6. The Hilltop Tower (Sounion 6).

difficult to associate them directly with the tower, although the kind of masonry employed is consistent with a date in the late fifth or early fourth century.

Without costly excavation it is difficult to date our towers more precisely, and even excavation would probably fail to explain their original purpose. On the other hand, similar towers in other parts of the Greek world¹⁰ have been studied by a long procession of archaeologists and explorers, who have produced several (often conflicting) theories as to their purpose. These theories are:

A. *That they are forts.*

In northern Attica, a large number of ancient towers has been convincingly presented as a network of border fortifications. Winterberger mapped a great number (most of which have by now disappeared) that he considered destined to guard the northern borders of Attica and the roads from the north to Athens;¹¹ some of these same border towers, which have been carefully described in recent times,¹² closely resemble our towers at Sounion. Can ours, then, be similarly explained? They can not, for there are no borders at Sounion to guard, and although the Princess Tower stands close to an important ancient thoroughfare, none of the rest are close enough to any road to be useful in guarding it.

B. *That they are watchtowers.*

In discussing two well preserved towers in the Megarid, close to Attica, Tillyard came to the conclusion that they were not forts but watchtowers, while similar towers in the Greek islands had long before been so explained by Ross; Miss Chandler agreed that this must have been the function of some of the towers along the northern border of Attica,¹³ but here again our evidence at Sounion will scarcely permit such an explanation. To be of any use, a military watchtower must somehow be connected with fortifications.¹⁴ There is, in fact, such a tower at Sounion, on an eminence easily visible

¹⁰ In the following discussion, towers referred to by site and number, *e. g.* Keos 1, will be found in the list appended to this paper. For the towers on Siphnos, the numbers refer to the list in *A.J.A.*, LX, 1956, pp. 52 ff.

¹¹ *Arch. Anz.*, 1892, pp. 122 ff., and map, p. 123. It must be noted that the roads shown on Winterberger's map are hypothetical and have been located *by the towers*. The south Attic towers referred to by Kotzias in *Νέος Έλληνομονήμων*, XVI, 1922, pp. 81, 482, have been neither listed nor located as far as I know.

¹² Particularly by Miss Chandler, *J.H.S.*, XLVI, 1926, pp. 1 ff.; cf. Milchhoefer, *op. cit.*, II, p. 12; VII-VIII, p. 18; IX, p. 3.

¹³ Tillyard, *B.S.A.*, XII, 1906, pp. 101 ff.; Chandler, *loc. cit.*, although she observes (p. 19) that the view from the tower at Varnava (Attica 4) is poor.

¹⁴ For signal-towers in connection with fortresses, see Krischen, *Die Befestigungen von Herakleia am Latmos* (= Wiegand, *Milet*, Vol. III, Heft 2, 1922), pp. 41 ff.

from the fortress on the cape, and it is built in precisely the same style as are the earliest walls there.¹⁵ The countryside at Sounion abounds in such excellent sites, but the towers we are considering here were not built upon them. In short, it is quite impossible to believe that they were ever planned as watchtowers.

C. *That they are lighthouses.*

Into the wall of a tower in Thasos (Thasos 13 in the list) are built some blocks (others lie about near by) which bear a three-line metrical inscription¹⁶ announcing that this tower, the memorial of Akeratos, stands here at "the highest point of the harbor as a deliverance for ships and sailors." The publishers of the inscription, followed by others, assumed that the tower was a lighthouse; yet the inscription seems to imply that it was a tomb as well. That our towers at Sounion are not lighthouses is evident, while the threshing-floors connected with Nos. 1 and 2, and the location of No. 5 in the center of an industrial region, rule out their identification as tombs. But it is not quite certain that the Thasos tower was either lighthouse or tomb. The verses of the inscription suggest that the body of Akeratos was lost at sea (perhaps off this very cape) and the tower constructed as a kind of memorial—perhaps a cenotaph; at the same time, by its position over the harbor (or roadstead) and its height, it served to warn approaching vessels away from the rocks.¹⁷ We need not suppose that the tower was built as a lighthouse, equipped with fire or other warning devices.

D. *That they are beacon-towers.*

Some hold that all ancient Greek towers were points in a giant network of signal-towers, sending smoke signals by day and beacon flares by night. I have pointed out elsewhere¹⁸ that some of the towers on Siphnos are only three to five minutes walk apart; further refutation is hardly needed.

E. *That they served as refuges from pirates.*

This is the oldest of all explanations of these towers—and one which is still very popular.¹⁹ The suggestion is both appealing and dramatic and, although lacking direct

¹⁵ I have drawn and photographed this tower, and propose to publish it in my general study of Sounion.

¹⁶ *I.G.*, XII, 8, *add.* 683; Baker-Penoyre and Tod, *J.H.S.*, XXIX, 1909, pp. 95 ff., no. 9, and p. 250.

¹⁷ This theme appealed to many later poets: *Anth. Pal.*, VII, 269 ff. For a tower serving as a tomb upon its owner's death, cf. *ibid.*, VII, 402. On lighthouses, cf. *R.E. s.v.* Leuchtturm (Ebert).

¹⁸ *A.J.A.*, LX, 1956, p. 51.

¹⁹ An early proponent of this theory was Buondelmonti in his *Descriptio Insularum Archipelagi* (1420 A.D.), F^o 40 (on Rheneia), quoted by Gallois, *Exploration archéologique de Délos*, III, p. 84. Some (among many) more recent adherents: Ross, *Inselreisen*, I, 1837, pp. 132 f.; Ormerod, *Liverpool Annals*, XI, 1924, pp. 31 ff.; Rostovtzeff, *Social and Economic History of the Hellenistic World*, III, 1941, pp. 1459 f., note 9; Kent, *Hesperia*, XVII, 1948, pp. 295 f., note 188.

proof, seems to fit very well the towers lining the coasts of the Cyclades, especially when we contemplate them on the map. At Sounion, we might believe that pirates could make their way inland from the coast to the Princess Tower, and it is perhaps conceivable that they might continue on up the cliffs to towers 2 and 3. But can we persuade ourselves that they extended their raids miles in from the sea, into the heart of a large industrial community? And, if they did, how many people could take refuge in towers 5 and 6? The pirate theory, then, although it might conceivably account for half our towers at Sounion, is clearly impossible for the other half; it will not do.²⁰

We have now considered the theories so far advanced to explain towers similar to ours, and have found none satisfactory. Therefore what we clearly need is not modern speculation, but some indication from antiquity itself as to their purpose. Although such clues are rare and widely scattered, they are nevertheless vital.

First, a fourth-century *poletai* list²¹ reports the lease of a silver mine located in the deme of Besa directly northwest of Sounion and records one of the boundaries of the mine as *πύργος καὶ οἰκία*, "a tower and a house." Now when we recall the Cliff Tower at Sounion, with a house near by, we may suspect that the arrangement in Besa was similar. Second, papyri refer to *pyrgoi* in a way so clearly showing them to be connected with farming estates that papyrologists long ago concluded that *πύργος* in these contexts should not be translated "tower" at all, but simply "farm-building" (*Wirtschaftsgebäude*).²² In addition, there is an ancient text which gives us the fullest account we have of a *pyrgos* (interpreted as this same kind of farm-building) together with its surroundings. Since the account concerns a property in Attica, and is probably of fourth-century date, it is of primary importance for our towers. In the anonymous oration against Euergos and Mnesiboulus²³ the plaintiff gives a lively description of an assault upon his farm. One man seized his flock of fifty sheep and the shepherd as well, while the other two went on to his farm, where they broke open the

²⁰ Similar difficulties arise at other tower sites. As examples we may cite Siphnos 14 and 18, which are on high and abrupt cliffs far above the sea; Astypalaia 1 stands low on a spot north of the harbor, yet faces *inward*; Argolid 4 is well inland, and commands no view at all; Kythnos 1 is said to stand in an especially isolated spot. Baker-Penoyre was perplexed as to what could be guarded by Thasos 2, while Bon remarked how far from the sea Thasos 16 stood. The list could easily be lengthened.

²¹ Crosby in *Hesperia*, X, 1941, pp. 14 ff., no. 1, lines 71-76.

²² The references are cited and discussed by Preisigke, "Die Begriffe ΠΥΡΓΟΣ und ΣΤΕΤΗ bei der Hausanlage," *Hermes*, LIV, 1919, pp. 423-432. The principal references are these: P. Strassburg 110.6; *B.G.U.* 1194.9; *idem* 650.8; P. Oxy. 243.15; P. Giss. 67.16; P. Lond. 2.371.3; *idem* 216.10. For similar references in Biblical texts, cf. Meyer, *Hermes*, LV, 1920, pp. 100 ff., and on this, Alt, *Hermes*, LV, 1920, pp. 334 ff.

²³ [Demosthenes], XLVII. In what follows I summarize paragraphs 53-57; on this passage see Hasebroek, *Hermes*, LVII, 1922, pp. 621-623. It is generally agreed that the attribution to Demosthenes is spurious: Blass, *Die attische Beredsamkeit*², III, pp. 543 ff.; Schaefer, *Demosthenes und seine Zeit*, III B, pp. 193 ff.

gate leading into the garden and carried off all the furniture and equipment that were in the house (*oikia*). The plaintiff's wife and children happened to be lunching in the courtyard (*aulē*) with their aged nurse. "The rest of the women-servants (for they were in the *pyrgos* where they live and work) when they heard the screaming closed up the *pyrgos* so that the men didn't get in."

From this description we can reconstruct the property of the unnamed plaintiff: first, a tract of unfenced pasturage, in which was a large courtyard, with a doorway at one side leading into the kitchen-garden (*kēpos*), his house (*oikia*), and somewhere within the courtyard another free-standing building called *pyrgos*, in which the servants worked. The *pyrgos* in this case is certainly a farm-building, but is there any reason why it cannot be an actual tower as well? The orator does, in fact, suggest that it was. Later on in the oration²⁴ we are told that Euergos made another raid on the farm; meantime, the equipment which had before been safely stored in the *pyrgos* had been "brought down" (*κατηνέχθη*) to be used, and was this time carried off. If we think of the Princess Tower, standing within a large courtyard, with traces of other buildings both inside the court and out, we can see at once how well it corresponds to the sort of property described in this oration. And we must inevitably conclude that the term *pyrgos*, although it may be correctly translated as "farm-building," means a farm-building which was, in actual fact, a tower. If the Princess Tower can be explained as part of a country estate, then so can the Cliff Tower with its threshing-floor, and the Golden Pig Tower with courtyard and house. Yet before we can consider this explanation proved, we must test it by at least a sampling of the many other towers of this type known in the Greek world: (a) in order to find the best counterparts for restoring the Sounion towers, (b) by accumulating information from various sources, to reconstruct a composite image elucidating our Sounion complexes, and (c) to discover whether these other towers may also be explained as parts of country estates.

I have compiled a list of towers of the same general kind from many parts of the Greek world,²⁵ arranged by diameter, when circular, or by mean average of length and width when rectangular.²⁶ From this list, it is at once apparent that the six towers at Sounion are among the smallest so far recorded. Indeed, I know of only two towers less than five meters in outer diameter: Thasos 12 (3.50 m.), which is so small that we can almost accept Bon's theory²⁷ that it was a lighthouse, and the Red Tower at Sounion (4.35 x 4.40 m.), which is in any case exceptional in that it stood in the midst of a busy industrial community. Of the others on my list of eighty, the large

²⁴ *Op. cit.*, paragraph 63.

²⁵ I have taken into account our six Sounion towers, 24 towers on Siphnos, and all other towers in the appended list (pp. 144 ff.) for which measurements (or plans) are available.

²⁶ The "diameters" here cited are always taken from the *outer*, not the inner, wall faces.

²⁷ *B.C.H.*, LIV, 1930, pp. 179 ff.

majority (59) measure somewhere between 5.15 and 9.20 m. across (almost every increase of 10 centimeters is represented by a tower).²⁸ Among the smaller towers of this large group belong the five remaining Sounion towers. At the other end of the list are the really large towers, eleven with diameters between 10 and 11 meters,²⁹ seven very large towers close to 12 meters wide,³⁰ and finally Siphnos 34, the largest of all, with the impressive diameter of 14 meters.

Of these eighty towers, only Megarid 1 and Keos 1 survived to modern times with their full height, and to these we may add three others preserved to somewhere near the top. Arranged in proportion of diameter to height, we find this series (all the measurements are in meters):

	diameter	height
Megarid 1	5.34	10.00
Megarid 2	6.40	<i>ca.</i> 15.00
Naxos 1	9.20	17.00 plus
Andros 1	10.00	20.00 plus
Keos 1	11.00	24.30

Scanty as these data are, they nevertheless suggest that the original height of a tower was roughly 2 to 2½ times its outer diameter; whether the lower or the higher figure is to be chosen will be dictated in part by the thickness of the outer wall.³¹ If we apply this proportion to the towers at Sounion, we can tentatively restore the Princess Tower, the Cliff Tower, and the Golden Pig Tower to a height of about 13 meters, the Yellow Tower to somewhere between 11 and 12 meters, the Red Tower to 9, or at most 10, meters, and the Hilltop Tower to 14 meters, or even more. We must also note in reconstructing the upper portion that the outer diameter will decrease somewhat toward the top, either by slightly narrowing the width of the blocks in successive courses, or by the use of two or three set-backs on the outer face. The inner dimension normally remains constant from basement to top story.³²

The doors of our towers at Sounion face roughly either to south or east (except for the Golden Pig Tower); although there are a fair number of exceptions among

²⁸ For example, here is the six to seven meter series: Siphnos 33 (6.00 m.); Siphnos 20 (6.10); Tenos 1 (6.25); Siphnos 10 (6.40); Sounion 6 (6.48); Siphnos 38 (6.70); Attica 1 (6.75); Siphnos 18 (6.80); Attica 5 (6.90); Siphnos 37 (6.90); Siphnos 24 (7.00).

²⁹ Andros 1, Mykonos 1, Tenos 2, Thasos 2, Siphnos 16, Seriphos 1, Thasos 14, Argolid 5, Argolid 1, Astypalaia 1, Keos 1.

³⁰ Thasos 16, Peparethos 3, Rheneia 1, Argolid 7 and 8, Siphnos 32, Keos 2.

³¹ For towers up to nine meters in diameter, the thickness of the walls varies from 60 centimeters to about one meter; this variation does not regularly correspond to increase or decrease of diameter. Towers ten or more meters in diameter have (with one exception) walls one meter or more thick.

³² At Naxos 1, there are two exterior set-backs, and similar set-backs have been noted at other sites. Keos 1 has no set-backs, but not only is there diminution toward the top but Graindor observed true entasis, and the height of the courses decreases with the height of the tower.

towers elsewhere (to be explained by local contingencies), these are the directions in which ancient towers regularly face. The reason for this orientation is readily seen when we consider how dark the ground story of a tower would have been with a single doorway as its only source of light. The doorways at Sounion are simply but massively constructed, with heavy lintels, and either monolithic stone doorposts, or jambs dressed smooth to hold the wooden doorframes. The door-leaves themselves were probably always wooden, and we know that they were considered to be part of the furnishings of the tower rather than part of the actual building.³³ In towers larger than ours at Sounion, where the masonry was correspondingly heavier and the weight over the door opening greater, the lintel had to resist enormous pressure, and in such cases simple three-block arches were sometimes used.³⁴

Three of the better preserved towers have large openings at the second-floor level. At Naxos and Andros these are directly over the main door, while at Keos there is no opening at the ground-level.³⁵ It seems likely that there were very often, perhaps even regularly, such openings at the second floor, reached by ladders from outside. We know that the ground floor was used for various kinds of work connected with the farm, and if (as I believe) the upper floors were used mainly for storage, it would be convenient to have direct access to them without having to disturb the work in progress below. Furthermore, at both Naxos and Keos there are projecting corbels farther up the tower on the side of the upper opening, and a rope slung over them could easily haul materials up and down; one is reminded of the haylofts of barns today.

Sometimes there are also smaller openings—true windows—in the upper stories, although to the cold north they are never more than narrow slits. At Keos, there is a kind of observation balcony outside (or at least the corbels to hold it) on all four sides just below the level of the roof.

All that is left within to indicate the upper floor-levels of the towers are the holes for wooden joists cut into the walls.³⁶ These are visible at both Megara towers for the second-floor joists, and at Keos for four stories above the basement, while at

³³ Cf. Kent, *Hesperia*, XVII, 1948, pp. 293 f. See also Robinson and Graham, *The Hellenic House (Olynthus, VIII)*, pp. 251 ff.

³⁴ So, at least, in Siphnos towers 11, 16, and 26. No. 11, where one springer has fallen, shows that these springers were doweled in below to hold their position until the keystone was slipped into place. This device presumably was used to avoid costly wooden centering. Because of a mix-up in numbers, I wrongly included Siphnos 34 among towers with arched doorways (*A.J.A.*, LX, 1956, pp. 52, 54). In point of fact, the builders of this enormous tower spanned the doorway with a very heavy marble lintel-block, which nevertheless cracked straight across the center, although only after the tower had been in use for some time.

³⁵ Naxos 1, Andros 1, Keos 1. The ground floor of the Andros tower is, in effect, a basement, with partially vaulted ceiling and only a narrow shaft leading to the floor above, where the staircase begins. Attica 1 also lacks a door at ground-floor level.

³⁶ Exceptions are the second floor at Andros 1, composed of radiating corbel slabs, and a somewhat similar arrangement at Siphnos 23.

Naxos they are preserved for five floors above the ground floor. Each of the upper stories was 2.75 m. high at Andros, higher at Keos. Normally, stairways run spirally in round towers, and around all four sides in rectangular towers, beginning either at the ground floor or the floor above it, and continuing up to the very top. In a few towers there apparently never was a stairway,³⁷ and we must assume that access to the upper floors was by ladder.

The upper floors were of wood, which has long ago perished, and our literary and papyrological texts are silent about them, except for implying that they were mainly used for storage of farm equipment and produce. What information we have about them is therefore derived mainly from the well preserved tower of Aghia Marina in Keos. Here there are indications that the upper stories were divided into sections by cross-walls.

That such was often the case at the ground-floor level is demonstrated by a good number of towers. On Siphnos, where the plan was consistently round, we find normally, upon entering the door, a stairway beginning to one side of us, while to the other a cross-wall runs from the inner wall by the door across the tower, cutting off somewhat less than half the circumference to form a side-room entered by a central door. At the Laouteri Tower (Siphnos 14), excavation established that this room served as a storeroom in which some sort of produce was kept, in great storage-jars partly sunken in the earthen floor. With the aid of a Delian inscription, we can identify such a room as a *πιθών*.³⁸ In the largest tower of all on Siphnos (the Aspros Pyrgos, Siphnos 34), there is a side-room to both left and right of the door, the wall to the left running beneath the corbeled stairway. In rectangular towers, the division-walls, when present, appear to cut the tower into equal halves, and sometimes further into quarters.³⁹

In three cases⁴⁰ (excavation would probably reveal others), cisterns or wells were found within towers, but only the one in Siphnos 34 has been studied. It is hewn from the native rock and is of roughly rectangular shape (2.80 x 4.12 x 4.33 m.), divided into two sections with a passage between them.⁴¹ Above one corner of the cistern was found a stone wellhead, square with round opening, and beside it a stone base with cuttings for two (wooden) uprights. These presumably held a simple winch for drawing up pails of water. It is almost certain that the excavators failed to observe some sort of passage leading out from this cistern to a shaft outside the tower wall. A similar cistern inside the Keos tower (Keos 1) is in fact connected to an outer shaft in this way; without such an arrangement it is difficult to understand how water could be introduced in to the cistern in the first place.

³⁷ Megara 2 is a certain example.

³⁸ *I.G.*, XII, 5, 872, line 53: τοῦ πύργου καὶ τοῦ πιθῶνος τοῦ ἐν τῷ πύ[ρ]γῳ.

³⁹ In halves: Argolid 2, Thasos 14; in quarters: Argolid 1, 3, 5, and Thasos 4.

⁴⁰ Andros 1, Keos 1, Siphnos 34.

⁴¹ Dragatsis, *Πρακτικά*, 1920, p. 151, gives the plan of this cistern.

Stone towers necessarily had heavy and well-built foundations and because of the massive construction their chances of survival⁴² are far better than lighter and more careless work. Thus, while ruins of towers can be counted today in hundreds, remains of out-buildings are comparatively scarce. Of those that do survive, the courtyard is the commonest. We have observed that Towers 1 and 3 at Sounion have preserved such courts, which we can identify with the *αὐλή* at the farm described in the Demosthenic oration.⁴⁴ Similar courtyards have been reported in connection with a number of other towers; they are more or less rectangular in shape, and either abut on the tower or completely enclose it. In Figure 7 some of the better preserved court-and-tower complexes have been reduced to a common scale. These courts, which enclosed not only the tower but presumably other farm-buildings as well, no doubt served a variety of purposes. One example (Siphnos 18), which abuts upon a tower, lies in an area so rocky as to preclude agriculture; here the only likely activity would be goat-herding, and the court may have served as a fold. In more fertile country, the enclosure was perhaps more to keep flocks of sheep and goats out, rather than in; we recall that within the *aulē* described in the oration there was apparently a garden, near which the owners enjoyed their meals *al fresco* in pleasant weather. In general, we may perhaps liken these ancient courtyards to modern barnyards, which may sometimes also include kitchen and flower gardens.

We are, I believe, safe in assuming that a Greek country estate comprised three basic structural elements: tower, court, and house (*πύργος, αὐλή, οἰκία*). Of the first two we now have a fairly good idea, but for the house our information is woefully inadequate. At Sounion, we do, indeed, find the foundations of a house preserved near the Cliff Tower, with a terrace before it,⁴⁵ and what may have been a house in one corner of the courtyard of the Golden Pig Tower, but aside from dimensions they

⁴² Survival, that is, at the hands of the elements; but where man is concerned, nothing is safe. In the Spring of 1940 the late Christos Tselonis of Laurion, a devoted *amateur* of antiquity, showed me the remains of a unique tower-complex in the region southwest of modern Laurion called Noria. There was the basis of a large round tower, about eight meters in diameter, and still nearly two meters high, with its door facing southeast. Close to it, to the southwest, was another round building, much smaller (*ca.* 3 m. in diameter) but preserved to almost the height of the large structure. This small building, a kind of miniature tower, had no visible entrance. It was built of a single circle of large blocks, which, though forming a perfect circle on the outside, were cut so as to make a perfectly square interior (*ca.* 1.50 m. to a side). Both buildings were of good local (Agrileza) marble. Unhappily, my camera was out of film and I had no measuring equipment along that day. The next autumn, when I returned fully equipped to draw and photograph the complex, much to my astonishment it had disappeared. Wagon-tracks leading to a newly built limekiln and from there to a new factory in the distance explained the tragedy.

⁴⁴ Such *αὐλαί* are also mentioned in papyri, *e. g.* P. Oxy. 243, lines 16 ff.: . . . τῆς προσούσης τῷ πύργῳ ἀπὸ βορᾶ μέρους αὐλῆς, ἐν ᾗ φρέαρ . . . P. Lond. 216, lines 18 ff. (= Wilcken, *Chrestom.* 192): . . . θησαυρὸν . . . ἐν ᾧ πύργος καὶ αὐλὴ καὶ ταμία ("storerooms") πέντε καὶ νοῦβασι (?) καὶ σιροῖς (grain-pits) καὶ τοῖς λοιποῖς χρηστηρίοις.

⁴⁵ With this, cf. Thasos 2 and 17.

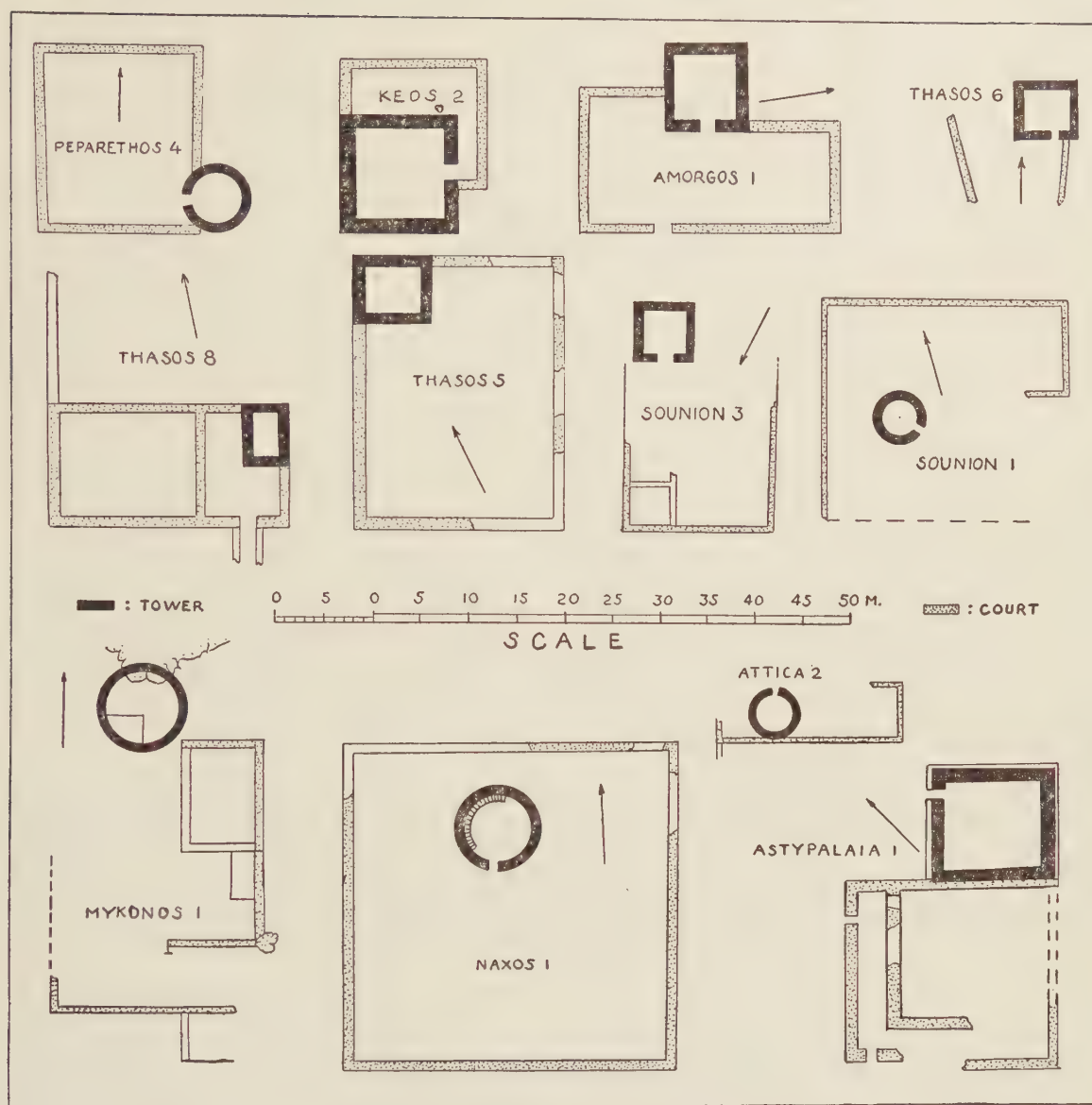


FIG. 7. Twelve Tower-and-Court Complexes.

tell us nothing. Traces of smaller structures connected with towers have also been reported at Mykonos 1, Kalymna 1, and perhaps at Astypalaia 1, but other than confirming the fact that the house was comparatively small, simple, and probably of only one story, they show us nothing.⁴⁶ Only excavation can give us the information we should like about these country houses, yet it seems unlikely that they will differ very markedly from humbler city residences, such as those uncovered in the Athenian Agora and at Olynthos.⁴⁷

Remains of various objects in and around the towers suggest in some cases the principal occupation of the owners. We have already observed the ancient threshing-floors at Sounion near both the Princess and the Cliff Towers; a similar structure is found near a tower at the extreme south end of Siphnos (Siphnos 38), and I daresay many others exist elsewhere unrecognized. Fragments of trachyte hand-mills were also found near the Princess Tower, and similar fragments within the Aspros Pyrgos (Siphnos 34); in the excavated tower at Cape Zoster (Attica 5), a sickle was found. In the Argolid, millstones are especially common in conjunction with towered estates; directly within one tower stood a large circular mill of the revolving type;⁴⁸ from all this we can properly conclude that the growing, threshing, and milling of grain was the principal occupation of many mainland estates.

In the smaller islands, where there are few areas large and fertile enough to raise grain profitably, our evidence suggests that olives were the main crop. An olive press stands within the tower at Siphnos 34,⁴⁹ and similar presses, or weightstones for presses, have been found near Kalymna 1, Amorgos 1, and Paros.⁵⁰ A press is also reported in a tower in Attica near Rhamnous (Attica 3), and another near a tower between Nauplia and Epidauros (Argolid 11).⁵¹

Remains of much ancient terracing near some of the island towers, notably on Siphnos and Thasos, suggest cultivation of the grape; this is perhaps corroborated by what I believe to be a wine press near Siphnos 20. We have already suggested that on estates in rockier country, agriculture gave way to sheep and goat herding. It is likely that some livestock, especially sheep, was kept on many other farms. We

⁴⁶ The tower at Cape Zoster (Attica 5) has two out-rooms appended to the back of the tower-wall.

⁴⁷ The Agora: R. S. Young, *Hesperia*, XX, 1951, pp. 187 ff. Olynthos: D. M. Robinson and J. W. Graham, *The Hellenic House* (Olynthus, VIII); D. M. Robinson, *Domestic and Public Architecture* (Olynthus, XII).

⁴⁸ Argolid 2. Mills were also found at or near Argolid 1, 3, 6, 11.

⁴⁹ Until recently another one stood just outside the tower.

⁵⁰ I have not found published notice of the Paros tower, which is a short walk southeast of modern Naousa. It is indicated on Philippson's map (*Petermann's Mitteilungen*, *Ergänzungsheft* 134). I visited and photographed both tower and weightstone in 1938.

⁵¹ And cf. *B.G.U.* 650, lines 6 ff. (= Wilcken, *Chrestom.* 365): κλήρου κατοικικου . . . ἐν ᾧ ἐλαιὼν καὶ πύργος καὶ ἕτερα.

may remember that the servant-girls were working in the tower of the farm described in the oration against Euergos and Mnesiboulos; a clue to at least one of their occupations is offered by the discovery of loomweights in two of the excavated towers.⁵² Finally, we must observe that a tower in Argolis contained a dyeing establishment.⁵³

It is now clear that wherever we have evidence it points to farming or other connected industries as the object of these towers' existence; we may safely conclude that all were in fact parts of country estates. In this light, we must re-examine the six towers at Sounion, bearing in mind that Sounion was, in antiquity, a part of the Laurion mining region, and by no means a primarily agricultural deme. The extent of this mining region was determined not only by the geological limits of the lode, but also by the courses of the stream beds within these limits, since water was all-important in the process of washing the powdered ore. The only area in Sounion today extensively planted with grain is in the lower Agrileza Valley, which lies completely outside the mining area; precisely here stands the Princess Tower, and there can be no doubt that the chief occupation of this estate was the farming and milling of grain. The grain threshed on the circular floor outside the enclosure wall may have been milled on the ground floor of the tower, the flour stored on the upper floors. Since the Cliff Tower also was furnished with a threshing-floor, we must suppose that the owner of this estate, too, raised grain, presumably along the foothills round about. The Golden Pig Tower and the Yellow Tower stand today in pine-covered highlands which skirt, but are not included in, the mining region. We can prove that these areas were deforested in antiquity by at least the third century B.C., and probably considerably earlier; they would then have offered fine cultivable land—whether sown to grain or to some other crop we cannot now demonstrate. Similarly, the Hilltop Tower stands on a pine-covered hill today; it was built directly over parts of a mining-works after the latter was abandoned, and by this time the trees on the surrounding slopes had almost certainly been devoured by the smelting-furnaces. All five of these towers, then, stood in good, if restricted, farming land. Furthermore, three closely adjoined an industrial center with a comparatively heavy

⁵² Attica 5, Siphnos 34.

⁵³ Argolid 3. Cf. P. Lond. 2, 371.3: . . . πύργον ἐν ᾧ βαφεῖον καὶ ἕτερα χρηστήρια. Argolid 3 is the well known "pyramid" of Ligourio. That I include both this and the "pyramid" of Kephalaria (Argolid 2) in my list of towers perhaps calls for explanation. As Lord pointed out, these are not true pyramids, but rather correspond to geometric *frustra*, enclosing a ground floor not unlike that of our other towers; the indications are that the superstructures (perhaps of mud brick) continued up vertically, precisely as in our square towers. Why this singular form for the ground floor was adopted is not known, although we may compare the heavy vaulted ground floor of Andros 1. A late (*ca.* A.D. 130) catalogue of farm properties (*I.G.*, II², 2776) which lists πύργοι (lines 65, 115) and πυργίδια (lines 15, 24, 117-118) also includes a πυραμῖς (line 16). On the inscription, see Mommsen, *Hermes*, V, 1871, pp. 129 ff.

population, with many mouths to feed. Since five of our towers stood on land that could be cultivated, and since there were urgent economic reasons why it should be cultivated, we may safely conclude that these towers do, indeed, mark the sites of flourishing agricultural estates.

We are left with the Red Tower, which stood not on the borders of the mining region, but in its midst. We may recall that this tower is smaller than the others, and that it cannot have been as high. It could not, I think, ever have been part of a farming estate, yet its general similarity to the others is enough to suggest a similar function. Although I cannot establish with certainty what that function was, it seems plausible to suppose that it was somehow connected with mining operations. Its salient features are: (a) it stands in the very center of the Sounion mining region; (b) it is to be restored as considerably lower than the others, and thus with fewer stories; and (c) the door has an unusually elaborate system of bolts and bars. These facts all suggest that the Red Tower, although modeled more or less after its farming neighbors, was used not for storing bulky wheat or oil, wine or wool, but silver and lead, the latter as ingots, the former either as ingots or as *coins*. As in the farm-towers, the ground floor may well have been used as a workshop, and in this case the work would have been the weighing and stamping of bullion.

Finally, we may close with some general observations on these towered country estates. I have attempted to deal with such examples as can be dated roughly within the Classical Period,⁵⁴ but the evidence for date is none too certain. Few towers have been excavated, and in those that have, significant evidence has either not been found at all, or has been overlooked.⁵⁵ But in most instances, the style of masonry suggests a range of dates for most of the towers mentioned above in the period between the late sixth and (earlier ?) third century B.C., and the little direct evidence we have confirms this.⁵⁶ That similar farm-towers also existed in later Hellenistic times is demonstrated by Grimal, while the papyri show that (at least in Egypt) they were still in use in the Byzantine period. It may seem odd that Classical literature is so silent about what must have been a common feature of the countryside; but we must remember that before the discoveries at Olynthos we were almost equally at a loss as to even the most elementary conception of the disposition of a Classical house. Meanwhile, we have the vivid description in the Demosthenic oration; we may also

⁵⁴ For a brilliant treatment of later towered farms, especially as revealed in Hellenistic and Roman wall-painting, see Grimal, *Mélange d'Archéologie et d'histoire*, LVI, 1939, pp. 28 ff.

⁵⁵ An example of the first instance: the towers excavated by Lord in the Argolid; of the second, Dragatsis' excavations on Siphnos (Siphnos 14 and 34).

⁵⁶ At Zoster (Attica 5) coins of the fourth and third centuries were found within the tower. Scranton, who excavated and studied the remains from Argolid 3, favors a fourth-century construction-date; some of the sherds from Siphnos 14 look like late sixth-century wares; Wrede's analysis of Attic walls leads him to a fourth-century date for Attica 1 and 4; swallowtail clamps were used in Keos 1.

recall Hero in her tower at Sestus,⁵⁷ then the fine *pyrgos* Konon's son Timotheos built for himself,⁵⁸ and that of Timon the Misanthrope,⁵⁹ the towers of Aglomachos and Euphrantas at Cyrene,⁶⁰ and the *pyrgoi* of Teos which both Wilamowitz and Eduard Meyer long ago brilliantly conjectured to have been manorial estates.⁶¹

We must also consider how it ever came about that a tower was the most prominent feature of an ancient estate. We know that the most conspicuous structure on a modern farm is not the farmhouse, but the barn, which dwarfs it. Similarly, in ancient Greece, a farm approaching the manorial estate in size must first of all be furnished with a place to store equipment and crops; and grain (always the principal crop) demanded a dry place. But where we build in wood, the Greek built in stone, and if his building spread out very far he would have trouble finding timbers long enough to roof it. The answer was obvious: to expand not out, but up. Thus he had a ground floor which could be used for storing oil in pithoi, wine in amphorae, and would also serve as a work-place for the women, while on the upper floors his grain could be high and dry. The top of the tower provided the owner an excellent command of his farm, where he might see his whole domain and make certain that his farmhands and shepherds were on the job. At the same time, the tower and all it held could be securely locked; it was thus reasonably impregnable against the kind of mischief described in the Demosthenic oration, and stood a better chance to escape looting in time of war.

Although we have deprived our towers of the romance connected with pirates and flashing fire-signals, we have established (as I hope the reader will agree) their real function, which is always an advance. Furthermore, the economic historian is given a new means of determining what areas were under ancient cultivation, and how they compare with the modern exploitation of Greek agricultural resources.⁶²

⁵⁷ Musaeus, 187 f. Similarly, Achilles at Skyros was made to share the tower of the daughters of Lykomedes (Philostratus Minor, *Imagines*, I, paras. 1 and 3).

⁵⁸ Aristophanes, *Plutus*, 180 and scholia.

⁵⁹ Pausanias I, 30, 4; Olympiodorus, *Vita Platonis* (Westermann), p. 4; cf. Judeich, *Topographie von Athen*,² p. 414.

⁶⁰ Herodotos IV, 164; Strabo XVII, 836. Cf. F. Chamoux, *Cyrène sous la Monarchie des Battiades*, Paris, 1952, pp. 149, 221.

⁶¹ *Sitzungsberichte Akademie Berlin*, 1906, p. 63, note 4; Meyer, *G. d. A.*, II, paras. 201, 204. The evidence is found in *C.I.G.*, 3064. See also Bequignon, *Rev. Arch.*, ser. 5, vol. XXVIII, 1928, pp. 185 ff., and the refutation by Ruge, *R.E.* (2nd ser., vol. 9), *s.v.* Teos, cols. 554-556.

⁶² The fact that islands today deserted are reported to have ruins of such farm towers would seem to indicate that in ancient times they were made to produce considerable harvest of some sort. Cf. Ross, *Inselreisen*, I, p. 134 (on Seriphopoula, off Seriphos); Wace and Dawkins, *B.S.A.*, XII, 1906, p. 171, for Pergousa and Pachia, off Nisyros. I visited Herakleia, off Amorgos, in 1945; the tower there, reported by Ross (*Inselreisen*, II, p. 34) has suffered much in recent times.

APPENDIX

CATALOGUE OF PRINCIPAL TOWERS CITED WITH THE MORE
IMPORTANT REFERENCES

AMORGOS

1. Aghia Triadha. Ross, *Inselreisen*, II, pp. 43 ff., and pl. 1; Scranton, *Greek Walls*, p. 167; Dawkins and Wace, *B.S.A.*, XII, 1906, p. 157, figs. 4 f.

ANDROS

1. Aghios Petros. Ross, *op. cit.*, II, p. 12; cf. Sauciuc, *Andros* (= *Sonderschriften Oest. Arch. Inst.* 8), pp. 29-34. For others, see Ross II, 15; Weil, *Ath. Mitt.*, I, 1876, pp. 242 f.; Sauciuc, 36; Philippson, *Beiträge zur Kenntnis der gr. Inselwelt* (= *Ergänzungsheft* 134, *Petermann's Mitteilungen*), map.

ARGOLID

References are to Lord in *Hesperia*, VII, 1938, pp. 481 ff.; *A.J.A.*, XLIII, 1939, pp. 78 ff.; *Hesperia*, X, 1941, pp. 93 ff. Cf. also Scranton, *Hesperia*, VII, 1938, pp. 528 ff.

1. Phychtia. Lord, 1938, pp. 481 ff.; Lord, 1939, p. 82.
2. Kephalaria. Lord, 1938, pp. 496 ff.; Lord, 1939, p. 82; also Weigand, *Ath. Mitt.*, XXVI, 1901, pp. 241 ff.
3. Ligourio. Lord, 1938, pp. 511 ff.; Lord, 1939, pp. 82 f.; Scranton, 1938, pp. 528 ff.
4. Lerna. Lord, 1941, pp. 103, 107 ff.
5. Below Kephalaria. Lord, 1941, pp. 95 ff.
6. Mycenae Station. Lord, 1941, pp. 93 ff.
7. Nemea Station. Lord, 1939, pp. 80 f.
8. West of Ligourio. Lord, 1939, pp. 80 f.
9. Argos-Tegea Road. Lord, 1941, pp. 109 f.
10. West of 9. Lord, 1941, p. 109.
11. Kasarma. *B.C.H.*, LXXIX, 1955, pp. 244 f., figs. 31 f.

ASTYPALAIA

1. Vathy. Dawkins and Wace, *B.S.A.*, XII, 1906, pp. 155 f.

ATTICA

References are to Milchhoefer, Text to Curtius-Kaupert, *Karten von Attika*, and Chandler, *J.H.S.*, XLVI, 1926, pp. 1 ff.

1. Plakoto. Chandler, pp. 14 ff.; Milchhoefer, VII-VIII, p. 18; Wrede, *Attische Mauern*, p. 34, fig. 8, 57, pls. 92 f.
2. Korydallos. Milchhoefer, II, pp. 12 f.
3. Aghia Marina. Chandler, p. 19; Milchhoefer, IX, p. 3.
4. Varnava. Chandler, pp. 18 f. Wrede, *op. cit.*, pp. 32, 56 f., pls. 68, 82.
5. Zoster. Stavropoulos, 'Εφ. 'Αρχ., 1938, p. 6, note 1 and fig. 6. Another tower at Cape Zoster is mentioned here.

IKAROS

1. Phanari. Ross, II, p. 158.

KALYMNA

1. Paton, *Class. Rev.*, VIII, 1894, p. 376; *J.H.S.*, XVIII, 1898, pp. 213 f.

KEOS

1. Aghia Marina. Of the many references to this well preserved tower, the following are the most useful: Graindor, *Musée Belge*, XXV, 1921, pp. 113 ff.; Welter, *Arch. Anz.* 1954, cols. 88-92, with reference to Schaubert's unpublished drawing.
2. Panachrantos Pyrgos. Welter, *op. cit.*, col. 92, fig. 23. For a list of 25 other towers on Keos, cf. Welter, *op. cit.*, cols. 87 f., fig. 24.

KYTHNOS

1. Ross, *Inselreisen*, I, p. 120.

LEROS

1. Partheni. Dawkins and Wace, *B.S.A.*, XII, 1906, p. 172, fig. 16.
2. Xerokambo. Dawkins and Wace, *op. cit.*, pp. 173 f., figs. 17 f.

MEGARID

1. Square Tower. Tillyard, *B.S.A.*, XII, 1906, pp. 101 ff., figs. 1 f.
2. Round Tower. Tillyard, *op. cit.*, pp. 105 ff., figs. 3 f. The measurement of the outer diameter used here is from fig. 4 rather than the text.

MYKONOS

1. Aghia Marina. Möbius, *Ath. Mitt.*, L, 1925, pp. 39 ff., pl. III, 2.
2. Stis Portes. Möbius, *op. cit.*, p. 42, pl. III, 1.
3. Between 1 and 2. Möbius, *op. cit.*, p. 43.

NAXOS

1. Pyrgos tou Cheimarrou. Droop, *Liverpool Annals*, X, 1923, pp. 41 ff., pl. X, 2 (wrongly titled); Ross, *Inselreisen*, I, p. 43.

PEPARETHOS

1. Helleniko. Fredrich and Wace, *Ath. Mitt.*, XXXI, 1906, pp. 126 ff.
2. Prionnos. Wace, *op. cit.*, p. 128, note 2.
3. Sindouka. Wace, *op. cit.*
4. Mavragani. Fredrich and Wace, *op. cit.*, pp. 125 f.

RHENEIA

1. Palia Vardhia. Kent, *Hesperia*, XVII, 1948, p. 251 and fig. 4.

SERIPHOS

1. Aspropyrgos. Ross, *Inselreisen*, I, p. 136.

SIPHNOS

For the many towers of this island, see *A.J.A.*, LX, 1956, pp. 51 ff.

SKIATHOS

1. Ag. Anastasios. Fredrich, *Ath. Mitt.*, XXXI, 1906, pp. 104 f., figs. 1 f.

SKYROS

1. Ag. Phokas. Fredrich, *Ath. Mitt.*, XXXI, 1906, p. 277.

TENOS

1. Avdho. Demoulin, *B.C.H.*, XXVII, 1903, p. 258.
2. Smovolon. Demoulin, *op. cit.*, pp. 258 f. The so-called building-inscription (*I.G.*, XII, 5, 955) is on a re-used block built into the mediaeval masonry of the rebuilt second floor; it thus has no sure connection with the tower.

THASOS

References are to Bon, *B.C.H.*, LIV, 1930 and Baker-Penoyre, *J.H.S.*, XXIX, 1909. I omit the buildings at Thymonia (Bon, p. 164; Baker-Penoyre, pl. XXI, e) and Elliniko of Potamia (Bon, p. 155 f.).

1. Aghios Ioannis East. Baker-Penoyre, p. 235, fig. 20; Bon, p. 162.
2. Aghios Ioannis West. Baker-Penoyre, p. 235, fig. 20; Bon, p. 163.
3. Amygladhia. Bon, p. 165; Baker-Penoyre, p. 244, pl. XVII, 5.
4. Astris. Bon, p. 164; Baker-Penoyre, p. 242, pl. XVII, 4.
5. Avatsinia. Bon, p. 165; Baker-Penoyre, p. 242, pl. XVII, 3.
6. Evraio. Bon, pp. 176 f., figs. 16 f.
7. Kalyvia Gravousa. Bon, p. 160 f., figs. 8 f.
8. Kaminorokhaiko. Bon, p. 165; Baker-Penoyre, p. 243, pl. XVII, 1.
9. Kephalos (= Phari). Bon, p. 169, fig. 12.
10. Limenaria. Conze, *Reisen auf den Inseln des thrakischen Meeres*, p. 38; Fredrich, *Ath. Mitt.*, XXXIII, 1908, p. 240.
11. Loutro. Bon, p. 162; Baker-Penoyre, pl. XV, 1.
12. Phanari. Bon, p. 151; cf. Déonna, *Ἐφ. Ἀρχ.*, 1909, col. 12, fig. 5.
13. Pyrgos. Bon, p. 154; Baker-Penoyre, p. 231, figs. 17 f.
14. Saliari. Bon, p. 151 f., figs. 3 f., pl. VIII.
15. Schidhia. Bon, p. 163; Baker-Penoyre, p. 240, pl. XVI, 3.
16. Theologo. Bon, pp. 166 f., figs. 10 f.
17. Trypiti. Bon, p. 165; Baker-Penoyre, p. 242, pl. XVII, 2.
18. Tsoukidhia. Bon, p. 174; Baker-Penoyre, p. 245.
19. Vathia Potamia. Baker-Penoyre, p. 244, pl. XVII, 6.

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EXCAVATIONS AT LERNA, 1955

(PLATES 38-48)

THE fourth campaign of excavation at Lerna was conducted by the American School of Classical Studies from June 1 to July 20, 1955.¹ Progress was made in the investigation of the eastern and, especially, the southern parts of the site, where the various separate pits and trenches of preceding seasons were united into one continuous area 60 m. long and 30 m. wide. Further soundings were also made on the edges of the mound, and a cemetery of the Geometric period was investigated on the southeastern slopes of Mt. Pontinos.

Grateful acknowledgment is made to the Greek Archaeological Service for continued interest and collaboration, to the American Philosophical Society for a substantial grant toward the expense of the architectural studies, to the staff of the French School's excavations at Argos for the loan of their tripod tower, ingeniously designed for the taking of photographs, and to colleagues of the Agora excavations in Athens for advice and many friendly services.

During the autumn, winter, and spring preceding this campaign the material found in 1954² was sorted and recorded at Corinth. Each excavator made detailed notes on the pottery from the sections where he had been in charge of the digging, and wrote a revised summary of his stratigraphical observations. By May of 1955 the inventory³ numbered 549 items of pottery and 1384 miscellaneous objects, 34 mill-

¹ The regular staff comprised Mrs. Caskey and S. Charitonides, members of the expedition since its inception in 1952; Miss Elizabeth L. Courtney, Fulbright Scholar for the years 1954-55 and 1955-56; Mrs. C. W. J. Eliot; L. E. Cotsen, architect; and J. L. Caskey, field director. O. M. Unwin, F.R.I.C.S., joined the staff on June 21 as surveyor. C. W. J. Eliot conducted exploration of the Geometric cemetery as well as assisting in many ways on frequent brief visits from Athens. Mrs. Cotsen cleaned and registered the whole pots and miscellaneous objects as they were found throughout the season. Miss Helen Besi assisted in supervising field work from June 13 to June 19, Miss Daphne Phylactopoulou from June 30 to July 10. Evangelos Lekkas was foreman, directing a force of 30 workmen, four sherd washers, and a water carrier. The expedition was again lodged at Myloi, Andreas Totsikas serving as cook and superintending the household establishment.

² "Excavations at Lerna, 1954," *Hesperia*, XXIV, 1955, pp. 25-49. References to earlier published reports are found there in note 2, p. 25. Further notices have since appeared in *Archaeology*, VIII, 1955, pp. 116-120; *B.C.H.*, LXXIX, 1955, pp. 240-244; *A.J.A.*, LIX, 1955, p. 226; *J.H.S.*, LXXV, 1955, Suppl. pp. 9-10.

³ Inventories and other records were maintained in 1954-55 by Miss Vasiliou and Miss Heath, the former also drawing up a catalogue of potters' marks and the latter assuming special obligation for the collection of clay sealings which she is preparing to publish. Miss Courtney and Mrs. Eliot took over the general responsibility for the records from the beginning of the campaign of 1955. Mending and restoring was carried on throughout the year by George Kachros with the assistance of his apprentices, Nikos Didaskalou and Spyros Marinos.

stones, and five coins. Uninventoried fragments of pottery, Early Helladic roof tiles, bricks, and samples of various other substances filled many hundreds of containers, already threatening to overcrowd the spacious facilities of the Corinth museum, where they are temporarily stored.

This continuing survey of the material, though preliminary in character, clarified many problems and helped us to define the further objectives of the excavation. For obvious reasons the House of the Tiles has come more and more to occupy our attention, being not only the largest and most impressive building yet found at Lerna but also marking a most significant development and turning point in the history of the settlement. Intensive efforts were therefore directed to the clearing of its eastern end, which was exposed and surveyed at the end of the campaign. In the course of this work we were afforded another opportunity of testing all the remaining layers of later date; this led to the discovery of a second shaft grave and many buildings of more than minor interest. Meanwhile the remains of strata, representing stages of habitation earlier than the House of the Tiles, received equally careful attention, and the digging on the southern flank of the mound ultimately reached another of our principal objectives, revealing undisturbed habitation deposits of the Neolithic town.

In the following account of the season's work, which is based on the field reports of the excavators, the eastern area is treated first, then the various sections of the south-central area, and finally the Geometric cemetery.

AREA D

Investigations were continued on the eastern side of the mound under the supervision of Miss Courtney. The deep shaft in Area D (*Hesperia*, XXIV, 1955, p. 27) was excavated nearly two meters further, to water level, and a Classical well was cleared to the same depth; the scarp of the railway cutting was cleaned and examined north and south of the main area (Fig. 1, DB, DC); Trench DA was dug to test the strata further north in Square H 3, and Trench DD to show what remained at the extreme edge of the site, still barely discernible beyond the railway track in Squares I-J 4.

The earliest stratum exposed in Area D in the preceding campaign was marked by a house with irregular curving walls, CE (Fig. 2), in which a pithos, partly imbedded below floor-level in a mass of yellow clay, occupied the northeast corner. This house appears in the lower right-hand corner of the photograph, Plate 38, a; the stratigraphical position of all the layers here mentioned is shown in a schematic section, Figure 2. This year it became clear that the "House of the Pithos" had undergone repairs at various stages. The earliest of its floors was at 2.50 m. A.T. Outside, to the south and east, were patches of road metal. Another house with a curving wall, BI, lies south of the street in ground not yet excavated, and remains of a third, also

apparently apsidal, were noted on the eastern border of the area in 1952 (Fig. 2, Wall F). Middle Helladic pottery of familiar types was present in the deposits of this phase, but sherds and some whole vessels of shapes and wares usually attributed to the Early Helladic period were recovered in considerable numbers.

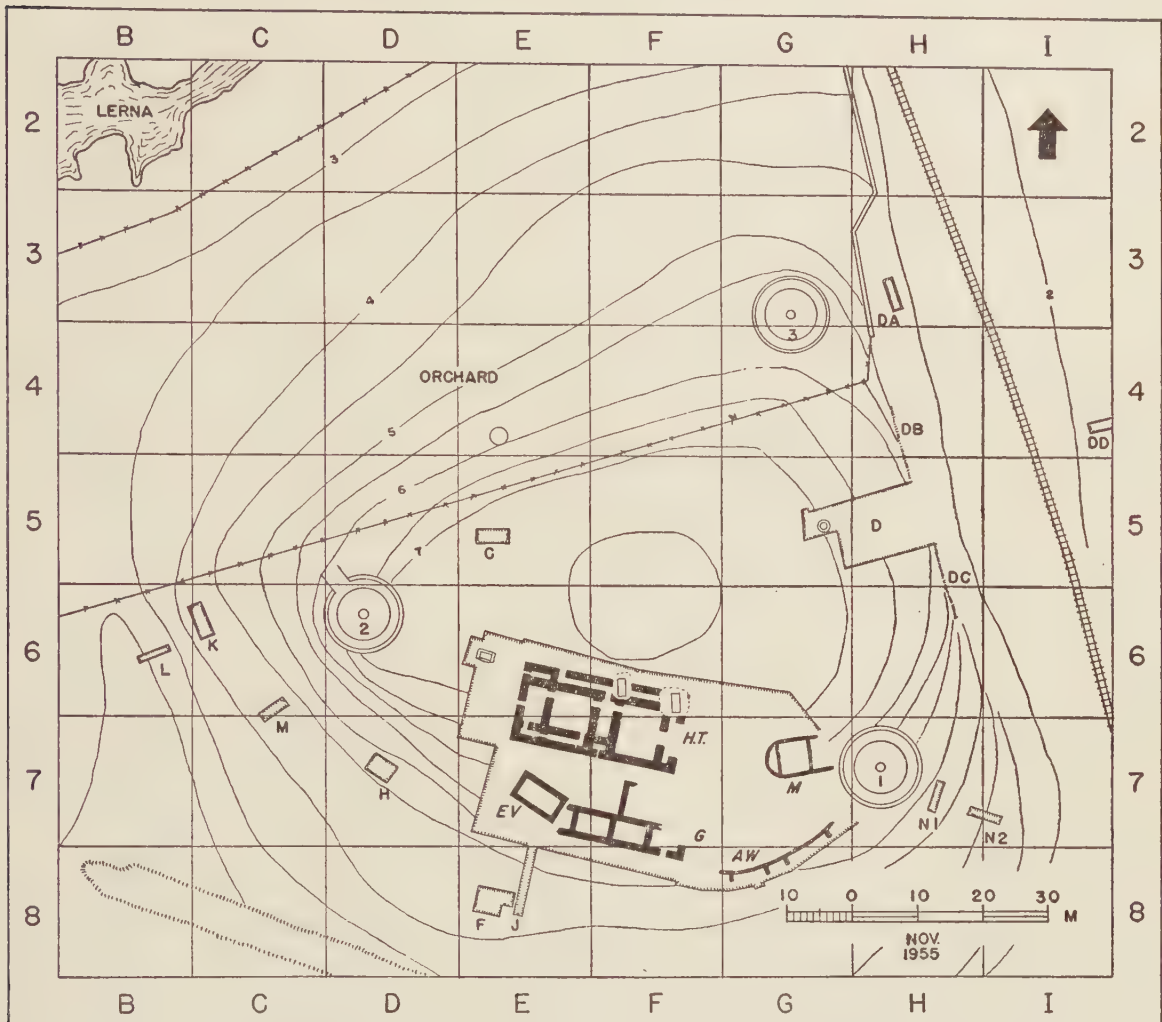


FIG. 1. Topographical Plan of the Site at Lerna (revised by C. W. J. Eliot, 1955, after a new survey by O. M. Unwin).

Next earlier in sequence was a stratum marked by walls of a different sort, resting at levels between 2.20 m. and 2 m. A.T. On the west side of the area lay a great accumulation of bones and broken pottery. The part of this deposit that was exposed within our trench was surrounded by a low stone barrier, CH, 0.30 m. to 0.50 m. thick and scarcely more than one course high, which described very roughly the arc

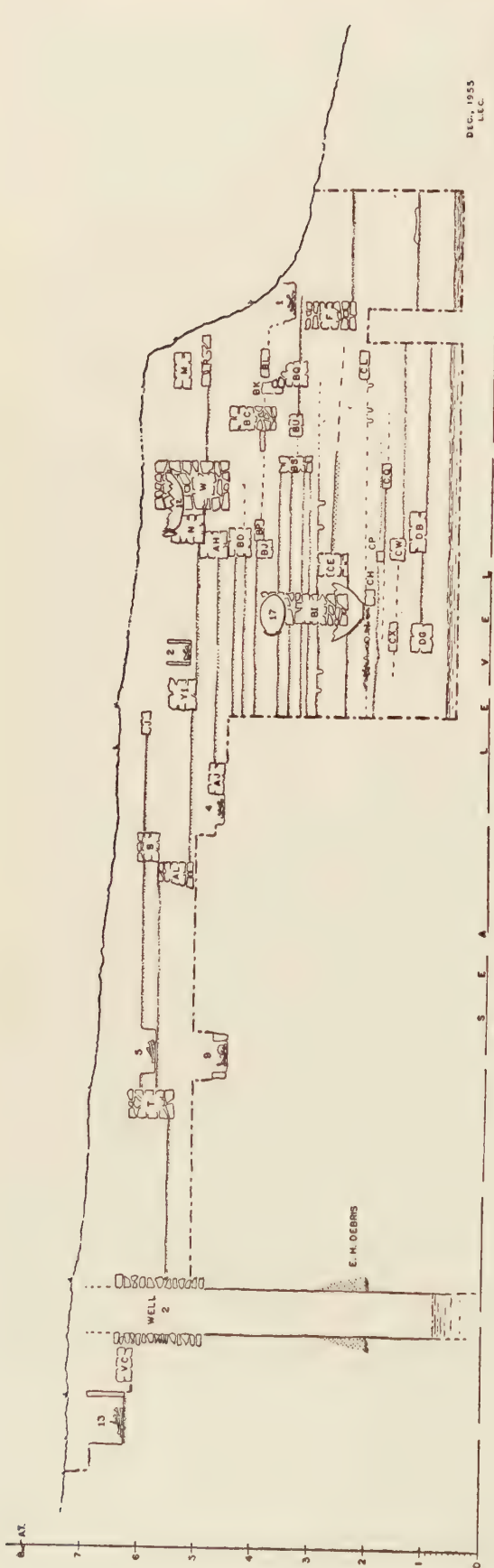


FIG. 2. Area D. Diagrammatic Section Showing the Principal Remains as seen from the South.



FIG. 3. Restored Section Showing Contour of Tumulus over Walls and Debris of the House of the Tiles, as seen from the East.

of a circle about 6 m. in diameter. Some 3 m. away toward the other side of the trench were foundations of a substantial straight wall, CL, running approximately north and south (Pl. 38, b). This was interrupted by a gateway, 0.70 m. wide, in which there was a large threshold slab and a paving of gravel and cobbles. The passage was flanked by short spurs projecting east and west from the main wall, not flush with the edges of the gateway but set back about 0.25 m. North of the gateway there was a narrow opening through the wall which may have been a drain. Throughout the whole area many small cavities were found, *ca.* 0.12 m. in diameter and 0.15 m. deep, filled with soft matter. Thirty-four of them were observed, the greater number north of the rubbish dump and behind the spur walls on the west side of the gate. They were presumably postholes. One may imagine a wooden construction of some sort around the gateway; the other holes do not form an intelligible pattern.

The long wall with its entranceway or small propylon appears rather more elaborate than is to be found in ordinary houses of this period. It was certainly not strong enough to serve as a wall of defence, but may have been part of an unroofed enclosure of some other kind. In the limited area cleared at this depth no further architectural evidence could be obtained. The associated pottery, like that from the stratum above, includes a small quantity of gray Minyan ware, some Early Helladic fabrics of known types, and a large amount of plain and coarse wares.

Another complex of walls, again quite different in orientation, was found at levels around 1.85 m. A.T. The most substantial of the walls, labelled CQ on our plans and section, ran roughly east and west along the northern side of the area. At its east end, which was demolished almost completely, it appeared to curve southward. Parts of other buildings were observable to the south and northeast, along with a bothros and several patches of pebble floors. A fairly continuous deposit of fine black carbonized matter, very thin in some places and reaching a maximum thickness of 0.10 m. in others, could be observed throughout this stratum.

A wall, CU, which came to light in the southwest corner of the area, was in use at the time of CQ but must have been built earlier. It forms a link with the next lower stratum, in which parts of two houses were recovered. One of these, CX, was represented by portions of its south and east walls, meeting at right angles, and vestiges of a floor at 1.62 m. A.T. The greater part of the building lies beyond the limits of the trench. The plan of House CV, however, lying largely within our area, was reasonably clear. It had a square end at the south, a straight side wall, CW, on the west, and a gently curving apsidal end at the north. There were gaps in the foundations on the south and west, one or both of which may mark the place of doorways. A floor of yellow clay with gray ash and carbonized matter lay at 1.55 m. A.T. In the photograph, Plate 38, c, a view from the north, House CV is at the upper left, Wall CU runs toward the upper right, and the southeast corner of House CX, with stones scattered, is at the lower right. Two bothroi, a few postholes, and two groups of egg-

shaped beach pebbles were found just outside these buildings. All the pottery recovered from the stratum appears, after preliminary inspection, to be of Early Helladic types.

Below this level the ground was increasingly muddy and it was necessary to interrupt the digging at intervals to allow drying by evaporation. Remains of several buildings were found. A wall in the extreme southeast corner of the area rested at 0.85 m. A.T. At the northwest was a curving wall, DG, perhaps part of an apsidal structure, bedded at *ca.* 0.95 m. A.T. A house called DA (Pl. 38, d), lying in and beyond the northeast part of the area, was evidently a little later, having its floor around 1.10 m. A.T. The walls of this house (e. g. Fig. 2, DB) were thick and solid, being built, like some of the others at this level, in herringbone masonry with flat stones set aslant to right and left in alternate courses. A gap in the west wall was probably made by a later bothros, though there may have been a doorway at this place. The southwest corner of the house was found broken away, and in the outer face of the south wall there was a rectangular niche, the purpose of which was not apparent.

Standing water was reached at 0.75 m. A.T. By probing below the surface it was discovered that a wall of a still earlier building ran east and west under House DA. The pottery at this depth was of Early Helladic types resembling those found in Square F 7 below the level of the House of the Tiles. Neolithic sherds were present in very small quantities.

A view of the deep cutting in Area D is seen in Plate 38, e. The top of the bank, on which is our protective barrier of stones, stands just six meters above the pool of ground water, which appears in the lower left-hand corner of the photograph. In the course of four successive seasons of excavation this eastern part of the trench has yielded, in descending order, a Geometric pithos burial, a Mycenaean layer (principally Late Helladic III B), and thirteen habitation levels of the Middle and Early Helladic periods, each separately marked in unmistakable manner by the stone socles of house walls, as well as by floors and, in many instances, streets, bothroi, and other features. Plans of each have been drawn, and the pottery and miscellaneous objects collected in accordance with their contexts.

No sharp break in continuity was observed in this long sequence of strata, and it would be a mistake at the present stage of the investigation to assign any one building to a specific chronological phase of the whole settlement. Area D is relatively small; only a few meters away another test would undoubtedly reveal certain houses that overlapped the span of two or three here noted and others that stood only briefly, being replaced several times during the life of one of ours. Fires and earthquakes seem not to have destroyed the entire community on any single occasion. Even the principal distinction between the Early and Middle Helladic layers is not obvious and must therefore be left undesignated until the pottery has been analysed in greater detail. We can say with confidence only that the Middle Helladic habitation was intensive here on the eastern side of the mound, accounting for fully three meters of the debris.

Well D. 2

The position of Well D.2 in the western extension of Area D (Square G 5) is shown by a double circle on the general plan, Figure 1, and appears in the diagrammatic section, Figure 2. This well, 0.90 m. to 1 m. in diameter, had been found in 1954 and excavated from the top as then preserved, 6.40 m. A.T., down to 2.70 m. A.T. The upper part had a stone lining; below, there were footholes in the east and west sides. In 1955 the shaft was cleared to water level at 0.80 m. A.T. Among the contents were terracotta spools and loomweights of Classical types, part of a figurine, a fragment of a small limestone Doric capital, and a very great number of broken tiles.

Far down in the shaft the sides were found to be soft, containing masses of fine burnt matter, sherds of Early Helladic pottery, and many flat Early Helladic tiles of a kind rather finer than those from the House of the Tiles. The face of a stone wall, apparently resting about 1.85 m. A.T., was visible in the bank. Quite evidently there are remains of an Early Helladic building, possibly of considerable size and importance, in this region. The burnt stratum is some 3 m. lower than the debris of the House of the Tiles and may represent one of the earlier phases, or the ancient contours may have been different enough to account for this discrepancy in levels.

Scarps DB and DC

The steep bank left by the railway cutting was cleaned and scraped this year some ten meters north and south of the east end of Area D. In Figure 1 the northern section (in Squares H 4-5) is labelled DB, the southern (Squares H 5-6) being labelled DC. Many strata could be distinguished in these banks by their color and texture, and here and there parts of stone walls and masses of fallen brick became visible. A quick test of the deposits was made by digging into the bank at different places. DC everywhere produced fragments of Middle Helladic wares. In DB, however, some irregularities appeared; the strata sloped downward fairly abruptly toward the north, and one of our samplings taken 5 to 6 m. from Area D and at a level around 4.40 m. A.T., far below the present surface of the hill, yielded fragments of very fine vessels assignable to the later stages of Late Helladic I and probably to Late Helladic II. This is a period not well represented by material from other parts of the site, and its occurrence at so low a level calls for further investigation.

Trench DA

An exploratory trench 6 m. long and 1.50 m. wide was dug at the west edge of the railway cutting below the embankment in Square H 3 (Fig. 1), where the surface was about 3 m. A.T. Mycenaean kylix stems and other sherds of Late Helladic III lay on the ground in this region, but the first undisturbed deposits encountered were Middle Helladic. A set of walls and remains of an oven represented an occupation level around 2.20 m. A.T., and another wall and two bothroi came to light some 0.30 m.

to 0.40 m. lower. Further floor levels, assignable to phases of the Early Helladic settlement, were noted around 1.70 m. and 1.40 m. A.T.

Trench DD

A second trial trench, 5 m. long by 1 m. wide, was excavated east of the railway track in Squares I-J 4, opposite Area D (Fig. 1). Here a low embankment of earth curves in an arc that appears to follow the original contours of the mound, indicating its size before the construction of the railway. Only a little is preserved, however. At the west end of Trench DD the surface is 2.70 m. A.T., at the east 2.20 m. A.T.; a short distance beyond lies the marshy ground that runs out to the narrow pebbly beach at the water's edge. The trench was excavated to a depth of 1.20 m. at its west end, revealing a wall 0.60 m. thick that runs north and south. Its bottom course projects eastward another 0.25 m. in a low step. Cement was found adhering to both sides of the wall and the adjacent filling contained a Roman lamp.⁴ The east end of the trench was dug to water level (here 0.61 m. A.T.). In the muddy earth only a few centimeters above the water was a ruined tile grave, the skeleton lying with its shoulders toward the east and the skull displaced. In the disturbed earth throughout this trench there were scattered fragments of Mycenaean and earlier pottery but it seems clear that the settlement of the Bronze Age had not extended this far eastward.

SOUTH-CENTRAL AREA

(SQUARES E-F-G 6-7-8)

Excavation in the large area on the southern crest and flank of the hill (Fig. 1) was divided as follows: Area B, the part overlying the northeast corner of the House of the Tiles and extending eastward along the north side of the Middle Helladic apsidal house M, was under the supervision of Mr. Charitonides; the southeast corner of the House of the Tiles and the region stretching east and south through Square G 7 into G 8, Areas G and AA, were cleared by Mrs. Caskey with the assistance of Miss Phylactopoulou; the opening of the western part of Building G and the remaining ground south of the House of the Tiles, westward through most of Square E 7, Area J, was directed by Mrs. Eliot; and an extension of the space due west of the House of the Tiles, Area BC, was made by Miss Courtney at the end of the season after she had finished the investigations in Area D. Miss Besi supervised the digging of a well in Square E 6 and another in G 7. Parts of over a hundred buildings were found, in addition to streets, courtyards, rubbish pits, graves, and various minor structures of different sorts. Only a few of these can be mentioned in this report. Insofar as the general sequence allows, they will be treated in the order of excavation, beginning with the latest.

⁴ Inv. L.774; H. 0.03, D. 0.066. Broneer's Type XXVIII.

Classical Wells

Well BA.1 was discovered in 1954, its shaft passing just outside the northwest corner of the House of the Tiles. The ancient filling was first observed a little below the present surface of the ground, about 7.10 m. A.T., and was removed down to 3.85 m. A.T. This year the shaft, slightly over 1 m. in diameter, was cleared to 0.55 m. A.T., 0.30 m. below ground water. It is unlined but the sides proved to be moderately firm. Debris of early habitations could be made out dimly in the banks all the way down. The filling contained Argive and a little Attic pottery of the fifth century B.C., fragmentary roof tiles, and a number of broken saddle querns and miscellaneous stone objects. At the end of the campaign this well was refilled to the ground level of the House of the Tiles.

Well A.1 cuts through the apse of House M (Area A, Square G 7). It was first observed in 1953 around 6.20 m. A.T. and cleared at that time to a depth of 1.05 m.⁵ In 1955 it was dug to ground water level at 0.85 m. A.T. The shaft is relatively narrow, measuring 0.85 m. to 0.90 m. in diameter, and has ancient footholes cut alternately on the east and west sides. The contents comprised saddle querns, fragments of tiles, terracotta loomweights and spools, a moderate amount of pottery including part of an Attic red-figured bell krater, and fragments of terracotta figurines of archaic and later types. The shaft was refilled at the end of the season to the level of the floor of House M and part of the wall was restored above it.

Graves

Cist and pit graves were found around and under the houses of the topmost Middle Helladic strata, as in previous campaigns. They were clustered particularly in the southwest corner of Square G 6 but were distributed in general all along the northern side of the area, which falls on the crest of the mound. Most of the skeletons lay on their sides with the legs drawn up and, as usual in graves of this period, there were few offerings. An unusual double interment was found in Grave J.2 (Pl. 40, e) near the southern border of Square E 7.⁶ Upon a neatly laid floor of pebbles at 4.20 m. A.T. lay a large skeleton fully extended on its back, head to the southeast. A skeleton of smaller size, though probably also of an adult, lay in a contracted position immediately above the first, giving a startling impression of one person nestling in the arms of another. A cup and a small jug, three carnelian beads, and one of white glass were found in the grave.

Two larger and more pretentious tombs also came to light this year. One is a shaft grave of royal type, very similar to that discovered in 1954⁷ and situated only

⁵ *Hesperia*, XXIII, 1954, p. 13, fig. 2.

⁶ Cf. the graves in Squares D 7, *Hesperia*, XXIII, 1954, pp. 20-21, and C 6, *Hesperia*, XXIV, 1955, p. 48. Clearly the M. H. burials were not all concentrated in the central parts of the site.

⁷ *Hesperia*, XXIV, 1955, pp. 32-34.

5 m. to the east of it (Figs. 1 and 5, Square F 6). We shall henceforth designate these shaft graves by the numbers 1 and 2. The outlines of the second, some 4.15 m. long from north to south by 3.25 m. wide, was first noticed only a few centimeters below the surface of the ground, about 7.20 m. A.T. In plan the pit was roughly rectangular but rounded at the corners, and the sides were undercut toward the bottom, especially at the south end. More than 3 m. deep, it had obliterated almost all the northeast corner of the House of the Tiles. The southern rim was broken at the top by what looked like a small niche, 0.60 m. by 0.75 m., the lower limit of which was marked by a slab of stone at 6.10 m. A.T. In the niche were fragments of at least three plain undecorated kylixes with angular rims, a type assignable to Late Helladic III.⁸ Near by in the filling were a few other sherds of later Mycenaean wares, but the great mass of pottery was like that of Shaft Grave 1, including a little gray and much yellow Minyan, red slipped ware, plain buff and gray-brown coarse fabrics, Matt-painted wares with patterns in one or two colors, and a liberal sprinkling of the earliest types of Mycenaean wares (L. H. I). At least a dozen bases bear incised marks of the kind noted in 1954 (*Hesperia*, XXIV, 1955, pl. 15, c-f). An engaging little calf's head, decorated with white lines on a black glazed surface, may have belonged to a figurine or may have projected from the side of a pot⁹ (Pl. 39, c). A small cup in plain ware, hastily turned and cut from the wheel¹⁰ (Pl. 39, b), is reminiscent of a type of vessel extremely common in Crete at the end of the Middle Minoan period and in Late Minoan I.¹¹ A total of 30 large basketfuls of potsherds was recovered from the filling of Shaft Grave 2, whereas Grave 1 had yielded only 13 basketfuls.

The grave itself (Pl. 39, a), in plan a long rectangle measuring 2.95 m. by 1.30 m. on the interior, is enclosed by remains of stone walls and floored with small pebbles. Much of the masonry was removed in antiquity; the surviving parts show good workmanship. The interstices between the wall blocks were filled with yellow clay, and a low heap of the same substance, mixed with layers of small stone and some brown clay, stood in the middle of the grave. The pebble flooring, slightly irregular, lay at an average of 4 m. A.T. On it were found a few small bones of an adult, chiefly tarsals and metatarsals, and near the southwest corner two fine cups: one of the Vaphio shape with a simple rock pattern and a horizontal band in dull red and black¹² (Pl. 39, d), the other a very delicate thin-walled teacup with a band of cross-hatched diamonds in dull black¹³ (Pl. 39, e). Just above the floor also were a few small bits

⁸ Cf. C. W. Blegen, "Excavations at Pylos, 1953," *A.J.A.*, LVIII, 1954, p. 30, pl. 6, fig. 5. A. Furumark finds little significance in the variations of this shape in Myc. III (*The Mycenaean Pottery*, p. 63).

⁹ Inv. L.5.167; L. pres. 0.046.

¹⁰ Inv. L.769; H. 0.071, D. 0.095.

¹¹ Evans, *Palace of Minos*, I, pp. 589-590, fig. 434; II, p. 308, n. 1.

¹² Inv. L.598; H. 0.066, D. 0.111.

¹³ Inv. L.597; H. 0.052, D. 0.096.

of bronze. All the rest of what one may presume to have been rich and plentiful furnishings had been taken out when the grave was opened in ancient times.

The great quantity of pottery from the filling of the shaft has not yet been studied but the vessels appear to be of the same sort as those represented in the corresponding lot from Grave 1, datable stylistically to the end of the Middle Helladic period and the very beginning of Late Helladic I. The two cups found *in situ* represent the final stage of development of the Matt-painted class. The presence of a few L. H. III sherds in the filling may be an indication of the time when the grave was opened. The niche in the upper part of the south rim was perhaps only a bothros of some sort, but it may have revealed the presence of the royal tomb; just possibly, it may mark the end of an exploratory trench, dug deliberately in search of this grave.

Excavation in the western part of Square E 6 yielded several small cist graves of the Middle Helladic type and one of unusual size. The position of the latter, which we call Grave BC.3, is shown on the general plan (Fig. 1). It too is a cist grave, but with massive walls carefully built of large stones, conglomerate boulders as foundations and flat slabs of limestone above. The chamber, its axis running east and west, is 0.98 m. wide and 1.83 m. long. It was found covered by two huge slabs of limestone¹⁴ with smaller flat stones masking the joint and surrounding the edges (Pl. 40, a). A layer of clay coated the whole surface of the eastern slab, which was intact, and lay in place over parts of the western, which was cracked. On the southeast edge of the cover stood an elegant Matt-painted cup¹⁵ (Pl. 40, c) and a small plain greenish-buff jug with a long beak.

When the western slab was removed (Pl. 40, b) the chamber was found partly empty, only the lower part being filled and coated with a covering of fine earth that had sifted in through the cracks. The base of a pot was visible next to the north wall, and the grave had an appearance of being quite intact. Yet we soon discovered that the floor had been disturbed, many white pebbles of which it had been composed being mixed with the soft earth filling. The whole central part of the grave had evidently been scraped out and only a few small bones and fragments were left; enough, however, to show that the occupant was an adult and had been laid with his head to the east. In the earth also were found a fragmentary bronze pin and two lead clamps for mending cracked pottery. Beside the north wall on a patch of undisturbed floor (5.48 m. A.T., 0.75 m. below the cover slab) rested two jugs, one a small undistinguished gray vessel with a horizontal rim, the other a quite fine beak-spouted pitcher in reddish-buff ware, mottled in the firing, with a twisted strip of clay applied along the outer surface of the handle¹⁶ (Pl. 40, d).

¹⁴ Eastern slab *ca.* 1.15 m. by 1.50 m.; western slab *ca.* 0.80 m. by 1.25 m.; thickness of each 0.16 m. to 0.20 m.

¹⁵ Inv. L. 600; H. 0.105, D. 0.132.

¹⁶ Inv. L. 595; H. 0.257, D. 0.171.

The state of Grave BC.3 is puzzling in several ways. It undoubtedly contained offerings that would have attracted robbers, and the remains as found indicate quite clearly that it was indeed opened and emptied, almost certainly from the top at the west end, on some occasion. Why, however, should tomb robbers trouble themselves to replace the great cover slab and the flat stones over the joint and even to wedge smaller stones around the rim of the cover? Why, furthermore, in this tomb as in the two shaft graves, should they remove the bones of the dead? This second question suggests a third: were the openers of the tombs in fact robbers in search of plunder, or were they possibly the descendants of the persons buried, seeking not treasure but whatever magical power was thought still to reside in the bones themselves? Classic parallels suggest themselves in great numbers, and certain of the instances reported, as for example the recovery by Kimon of bones believed to be those of Theseus, are undoubted historical events.¹⁷ If at some time in the Mycenaean age or later still the people of Lerna moved away from the site, it is at least plausible that they may reverently have carried with them the bones of their heroic ancestors. This is of course only an hypothesis, not subject to proof, and therefore not to be advanced or accepted without reserve. Some explanation of this sort appears, however, to be required.

Middle Helladic Strata

Excavation in the eastern part of the main area this year disclosed remains of eight to ten strata or habitation levels above the debris of the House of the Tiles, some more significant than others. Several of the topmost, containing large quantities of Minyan and Matt-painted wares, can be assigned without question to the Middle Helladic period, and at least two or three, at the bottom of the series, are identifiable by their pottery as Early Helladic. The intervening strata cannot be assigned until the material recovered has been more thoroughly studied.

The highest and presumably the latest floor level preserved in this region lay at 7.40 m. A.T. in Square F 6. One of the cist graves, B.16, is assignable to the same phase. Remains of house walls began to appear a little lower. Along the north edge of the excavated area a well built stone socle was revealed. It stands 0.60 m. high and belongs evidently to a house lying farther north. Next to it ran a street, on the other side of which there were traces of further buildings with floors around 6.90 m. A.T. Among them were remains of an oval structure about 1.60 m. wide by 2.50 m. long, consisting of a thin surrounding wall of bricks and a central oblong pillar of clay which may have supported an upper flooring or a domed roof (Pl. 41, a). At the east end there was an opening about 1 m. wide, partly blocked by a stone barrier, and beyond this remains of another similar complex. Some signs of burning were observable, suggesting that these may have been large ovens of some sort, possibly kilns.

¹⁷ Plutarch, *Theseus*, 36, 1-3; *Kimon*, 8, 5-7; the bones of Orestes, Herodotos, I, 67-68; more than a dozen other cases are recounted by Pausanias (see index to Frazer's commentary under the word "bones").

In the same district, among remains of houses one or two phases earlier in the Middle Helladic series, we came upon another structure of comparable form. Its walls were much more substantial, being built of stone. Horseshoe-shaped, with the opening toward the east, the chamber measured about 2.70 m. in length by 1.80 m. in width, and in the interior had a large rectangular pier which divided the space into a northern and a southern compartment. The walls were coated on the inside with clay in which grooves were left by the fingertips of the mason. Walls and clay floor showed signs of intense continued burning; the floor was blackened and the chambers were full of gray and white powdery ash, partly solidified, in which there were also pieces of a vitrified substance and some green matter, perhaps the residue from molten copper. Just outside the open end of the horseshoe was a fan-shaped apron of burnt matter, made up in layers of brown and black ash with hard white crusts. Evidently this was a furnace of some kind, raked out and refired successively. Tentatively we have called it a foundry.¹⁸

From an associated stratum, not earlier than these remains, came fragments of an asymmetrical jug coated with very shiny black glaze and decorated with patterns in dull white and orange-red paint (Pl. 43, a).¹⁹ Like numerous other pieces found at corresponding levels, this is strongly reminiscent of the Middle Minoan Kamares style, if not actually an importation from Crete.

The foundry appears to have been contemporary with the latest occupations of House M (Area A).²⁰ Another series of buildings has now been recognized as belonging with the first phase of House M, and an extensive group can be assigned to the next earlier stage, that of Houses Q and D.²¹ These lie around the juncture of Squares F-G 6-7. Most of them were apsidal. They were aligned north and south or east and west and were set close together, separated by narrow lanes. Considerable remains of one, called 98 A, were uncovered this year. It had been reconstructed or remodelled at least once and had been destroyed finally in a severe fire, the brick walls falling in and covering the floor and the household furniture (Pl. 41, b). This house was 4.50 m. wide and had an apsidal room at the west end, most of which was destroyed by Shaft Grave 2 (Pl. 41, c). Thin brick partitions divided the interior. In one of the rooms there was a square corner bench of clay, overlying an earlier hearth, and a series of permanent bins, also fashioned of clay. The broken pottery recovered from House 98 A filled 25 five-gallon tins, and the mending of it has already yielded an array of large storage jars in Matt-painted, plain, and coarse wares as well as a few smaller

¹⁸ A crucible probably used in metallurgy was found near here in 1953 (*Hesperia*, XXIV, 1955, p. 42, pl. 14, f).

¹⁹ Inv. L. 765; L. of fragment illustrated 0.084.

²⁰ *Hesperia*, XXIII, 1954, pp. 14-16.

²¹ *Hesperia*, XXIII, 1954, pp. 16-17; XXIV, 1955, pp. 30-32.

vessels. Among the latter is a squat flask in black burnished ware with suspension holes at the rim and a pattern of fine incisions on the shoulder²² (Pl. 43, b).

Bone pins of fine quality have been recovered from Middle Helladic strata in all parts of the site. Four examples of these are illustrated on Plate 47, a-d.²³ The "hammer-headed" pin, b), is of special interest for comparative study since parallels may be adduced from Anatolia, south Russia, Italy, and various distant parts of Europe.²⁴

Below the stratum of House 98 A and above the debris of the House of the Tiles remains representing at least four other significant habitation levels were distinguished in the course of excavation this year. In three of these there were very large apsidal houses, some having clear traces of central hearths (e.g. Pl. 41, d), of a type most frequently found in Middle Helladic settlements. The pottery associated with the earlier buildings of this series, however, is not of characteristic Middle Helladic fabrics, and it seems best to postpone discussion of the stratigraphical and chronological problems for the time being. Pieces of special interest from this context include a small conical cup, coated on the exterior with dark glaze over which was a broad band in dull white²⁵ (Pl. 43, c), almost certainly imported from Crete, and a bead and pendant of dark gray steatite, evidently parts of a necklace²⁶ (Pl. 47, g, h).

To this stage belong also some of the architectural remains cleared in Squares G 7-8, south of House M (Fig. 1): one or two houses; another workshop, from which we recovered a duck-like askoid vessel in dark gray ware with incised and punctuated decoration, related to the Early Cycladic type; and a series of retaining walls running roughly northeast and southwest along the contours of the mound. The outermost and most substantial of these is AW, which appears on the plan. It was traced over a length of some 23.50 m. The face toward the southeast, fairly well made and standing to a height of six or seven courses, was supported by four projecting spurs or buttresses. The northwest face was irregular and evidently not designed to be exposed. Fragments of developed Middle Helladic pottery were found in the ground outside the wall, whereas tests on the inner side yielded only Early Helladic wares. The other walls, little more than rows of stones irregularly set, lay higher on the slope behind

²² Inv. L.588; H. 0.079, D. 0.077.

²³ a). Inv. L.4611; L. 0.115; from Area D, House BJ (*Hesperia*, XXIV, 1955, p. 28). b). Inv. L.4609; L. 0.067; from Area D, stratum at 2.85 m. A.T. (*Hesperia*, XXIV, 1955, p. 29). c). Inv. L.5.107; L. 0.047; from Area B, 6.40 m. A.T. d). Inv. L.5.67; L. pres. 0.05; from Area G, 5.85 m. A.T.

²⁴ V. G. Childe, *The Dawn of European Civilization*, 4th ed., pp. 153, 154, 158, 173, 184, 240.

²⁵ Inv. L. 768; 0.075, D. of rim estimated 0.09. Mr. Sinclair Hood, who was good enough to examine a large selection of the material from Lerna with us recently, observed that this cup finds close parallels in deposits of Middle Minoan Ia at Knossos. Cf. Evans, *Palace of Minos*, I, p. 173, fig. 122, nos. 7, 9, 10.

²⁶ Bead: Inv. L.5.300; L. 0.025. Pendant: Inv. L.5.301; H. 0.034.

AW. We concluded that the whole series was probably built to raise the ground level in this sector at a time when the site was becoming crowded and more space was wanted.

Early Helladic Period, Late Phases

Two to four successive building levels, later than the easily recognizable debris of the House of the Tiles but certainly assignable to the Early Helladic period, were recorded at various places east and south of the great edifice in the areas which we called B, G, and J. These strata belong without doubt to a single cultural phase, being distinguished by the presence of ceramic fabrics bearing rectilinear patterns in dark paint on a light ground²⁷ (Pl. 45, a-e), fine slipped and burnished ware which is fired black, gray, or reddish-brown,²⁸ coarser ware with a careless smearing of black or brown glaze, vessels with multiple ridges obliquely slashed in imitation of twisted cords (e. g. Pl. 44, c²⁹), and heavy brown cooking pots, often roughly burnished, with rudely fashioned knobs and lugs. Small stemmed cups, sometimes pierced to serve as strainers or braziers like the one illustrated on Plate 43, d,³⁰ also occur in burnished coarse ware.

As an example of the buildings of this stage we may take House CU, which stood in the northeastern part of Square F 7, partly overlying the ruined southeast corner of the House of the Tiles. It comprised two rooms, separated by a partition wall; the eastern 4.55 m. wide by 4.75 m. long, the western having the same width but being wholly demolished at the end. The stone socles of the walls, irregularly constructed, had an average thickness of 0.40 m. The original floor level, very uneven, was around 5.10 m. A.T.; later another was installed a few centimeters higher. Beside the north wall of the east room were remains of a hearth or domed oven with a floor made of potsherds. On the opposite side of the room was a rectangular platform, 2 m. long by 1.50 m. wide, made of a single layer of large bricks. Three bothroi were found within the limits of this room, the largest being conical in shape and descending to the unusual depth of 1.35 m. below the floor. All the debris showed signs of burning. Household implements and much broken pottery were recovered from the floors and bothroi; many sherds from the conical bothros joined others from the floor deposit.

Objects collected from House CU include a nail and pin of bronze or copper; a stone pounder, a slate disk, and two obsidian blades; three awls, a tube, a polishing tool, and a spatula of bone; a bead made from a fish vertebra; a terracotta whorl of

²⁷ Blegen's class C I, *Korakou*, pp. 8-10; *Zygouries*, pp. 103-106.

²⁸ E. g. *Hesperia*, XXIII, 1954, pl. 9, a. A bowl of related shape, coated brown on the exterior and decorated with a painted linear pattern on the inner side of the rim, is illustrated on Plate 43, e (Inv. L.770; H. 0.173, D. 0.271).

²⁹ Inv. L. 579; L. of fragment 0.166. This unusually elegant piece was found in Area D in a late stratum of the Early Helladic layer.

³⁰ Inv. L.782; H. 0.125, D. 0.127.

conical form; and a quantity of charred grain. Among the whole or restorable vessels are the following: in patterned ware, a small tankard and a miniature cup, two small and two large jars (Pl. 45, b, c),³¹ and a two-handled bowl on a tall pedestal-base (Pl. 45, a);³² a two-handled bowl in slipped and polished ware, mottled black and brown; a brown slipped askoid jug; a miniature tankard in plain ware and a tan jar with globular body; a jar smeared with black paint; two two-handled bowls and a large one-handled jar or tankard in coarse brown burnished ware. By far the most remarkable vessel in the whole group is a very large jar in thinly glazed ware with three flaring trumpet-shaped mouths, the rims of which are joined together by a disk over the center of the body.³³ The shoulder bears an intricate pattern of ridges with oblique slashings. Most of the bottom of this vessel is missing and the exact shape of the base is not certain, but a fragment indicates that it was a moderately high pedestal spreading at the lower edge. Plate 43, f, shows the pot in the course of restoration.

One other building that deserves notice here is an apsidal structure, slightly earlier than House CU and assignable to the time just after the destruction of the House of the Tiles. It was about 11.50 m. long and probably 5 m. wide, with its apse to the west over the remains of Room XIII (see Fig. 5). The outline of the building, where visible at all, was marked not by the usual stone socles but by a narrow channel about 0.25 m. deep, at the bottom of which small stones were set at intervals. Near the east end, which was apparently square, there were several post holes aligned with the channel. Evidently the walls of this house were made of perishable material, perhaps reeds and clay, supported on a wooden framework that was firmly implanted in the ground. Evidence of comparable construction has been noted in contemporary and slightly later strata in Area D.

A few miscellaneous objects of characteristic types, found in the Early Helladic strata succeeding the debris of the House of the Tiles are illustrated on Plate 47: a pair of bone toggles³⁴ (e, f); two conical terracotta objects with flanges at the sides, probably stylized figurines³⁵ (j, k); and five fragments of anchor-shaped terracotta objects.³⁶ (l-p).

The House of the Tiles

The east end of the House of the Tiles, including most of the north corridor, IV,

³¹ b). Inv. L.628; H. 0.32, D. 0.30. c). Inv. L.641; H. 0.31, D. 0.30.

³² Inv. L.629; H. 0.20, D. 0.20.

³³ Inv. L. 771; H. restored 0.63; D. 0.532.

³⁴ e). Inv. L5.226; L. 0.063. f). Inv. L5.237; L. 0.069.

³⁵ j). Inv. L5.391; H. pres. 0.052. k). Inv. L5.392; H. pres. 0.07. Cf. C. W. Blegen, *Zygouries*, p. 187, fig. 177.

³⁶ l). Inv. L5.132; H. 0.051. m). Inv. L5.143; H. pres. 0.049. n). Inv. L5.126; H. pres. 0.045. o). Inv. L5.138; L. pres. 0.03. p). Inv. L5.319; H. pres. 0.048. Cf. Frödin and Persson, *Asine*, pp. 250-251, fig. 177, no. 1.

a large part of Room XII, and most of the east corridor or vestibule, XIII, was cleared in 1955 (Fig. 5). Debris from the burning of the building was not quite so deep here as at the west end, and not comparable at all to the great heap over the central rooms. The contour of the mass of ruins coincides with and in part determines the state of preservation. Out at the edges, whatever remained of the walls was razed soon after the fire, as will be described below. Further damage was caused by the digging of bothroi and, later, of Shaft Grave 2, with the result that the plan of the east front of the building is much less certain than the rest.

In this year's digging Corridor IV was followed eastward from Shaft Grave 1 (*Hesperia*, XXIV, 1955, p. 38) to the place where it had been destroyed again by Shaft Grave 2. Beyond the latter, only a pair of stones was found *in situ*, marking the northeast corner of the building. The narrow space labelled XIII, only 1.15 m. wide, may have run the full breadth of the building from north to south or, more probably, was closed at the north by an extension of the north wall of Room XII. The southeast corner of the building, though dilapidated, could be securely fixed; it lay only a few centimeters beyond the line where we stopped digging in 1954.

Thus the external dimensions of the House of the Tiles at ground level can now be given with a fair degree of accuracy. From corner to corner, allowance being made for damage to the walls and the roughness of the masonry, the north side measures 25 m., the east end 12.13 m., the south side 25.10 m., and the west end 11.78 m. The diagonal from northwest to southeast is 27.67 m., that from northeast to southwest 27.84 m.

The outline of Room XII was established this year. This is the largest room of the ground floor, measuring 6.43 m. from east to west by 8.05 m. from north to south, and with its fine stuccoed walls was undoubtedly the most impressive of the lower apartments; the arrangement of the rooms upstairs has not been determined. At the northeast corner of Room XII, near Shaft Grave 2, the north wall was destroyed by one of the later bothroi, which left a gap where there may possibly have been a doorway. The principal entrance, however, was unquestionably on the east, in the place marked P on the plan, where the wall running southward had a finished end and a deep slot in the ground marked the position of the wooden sheathing that had covered the jamb (cf. Door H). The wall to the south of P was badly damaged by later intrusions. If it was originally equal in length to the northern part, the doorway was very large indeed, measuring some 2.45 m. or about eight feet³⁷ in breadth. No evidence of inner supports has yet been discovered in Room XII. If any existed (as might be expected in so large a space) traces may still be found when a heap of debris which we left on the floor as a temporary *martyra* is cleared away.

The east façade of the building and the arrangement of the main entranceway

³⁷ *Hesperia*, XXIV, 1955, p. 40, note 29.

that gave upon the shallow area XIII are difficult to reconstruct, since a large section of the east wall is missing. In imagination one might here restore a sort of portico with columns standing in the line of the east wall, opposite the jambs of Door P, and alcoves at either end of XIII; an arrangement of that kind seems to be called for, but no column bases have been found. A very large irregular slab of stone, probably related to the house, was noted 1.20 m. east of the façade at a level corresponding with the floor. Investigation will be pursued further in this area.

The small amount of pottery recovered from the building in 1955 is not of distinguished quality. Its affinities are clearly with the wares of the earlier phases rather than with the new styles which followed the catastrophe. Two fragments of a remarkable stone cup⁸⁸ (Pl. 47, i), which may have come from the house, were found in and immediately above the burnt debris. Although the upper part of the body and all but



FIG. 4. Early Helladic Stone Cup, probably from the House of the Tiles (1:2). (Restored drawing by Alikí Halepa Bikaki.)

the lower attachment of the second handle are lost, there can be little doubt that this fine vessel was shaped as in the restored drawing, Figure 4. The streaked gray marble is reminiscent of the material from Mochlos and other Early Minoan sites, but the shape suggests Anatolian rather than Cretan parallels.

Although the site appears to have been crowded in most periods we have not yet found any other buildings that were certainly standing at the time of the House of the Tiles. Excavation has not yet proceeded far to the north and west. On the east and south it is clear that there were broad open spaces. The plan presented here as Figure 5 shows a number of earlier structures in order to indicate their relative size and position, but all these had been demolished and their foundations covered over before the House of the Tiles was built.

It is not clear how long the great building stood. The destruction left an enormous heap of debris, highest over Room VII and spreading outward beyond the

⁸⁸ Inv. L5.750; H. to rim 0.079.

walls. The sloping contour of this mass was noticed as early as the campaign of 1953 and again more clearly in 1954 (*Hesperia*, XXIV, 1955, p. 35). Toward its edges we had observed and recorded a series of curving rows of rounded stones, which we guessed might have been laid to hold down the walls of temporary shelters (*Hesperia*, XXIII, 1954, p. 23; XXIV, 1955, pp. 36, 43, pl. 20, b). In 1955 a similar but much longer row of stones came to light just south of the House of the Tiles (Pl. 42, a), and when this group was plotted on a plan with the others certain features of the whole complex suddenly became apparent. All the rows fell on the circumference of a single great circle, nearly 19 m. in diameter, which exactly bordered the principal mass of debris and had its center over the western edge of Room VII. Accumulations of gravel and small stones had been found near each row along the periphery (as in Pl. 42, a, lower right) and at various places within the circle, just above the burnt matter. Once aware of the nature of these remains, we had no difficulty in recognizing two of the rounded stones as they came to light this year over the northeast part of Room XII and another in the ground just north of Corridor IV. No continuous row had been found on the west side over Room V in the earlier campaigns; a few single stones may have been overlooked.

The circle is shown prominently on the plan, Figure 5, and the mound of debris, covered by a continuous layer of small stones, is reconstructed in a diagrammatic section, Figure 3. The arrangement was obviously deliberate, the circle being carefully and accurately laid out and the mound of debris graded to a fairly regular convexity. Earth was not brought in to form this mound; rather, considerable quantities of the fallen matter and burnt wreckage of the House of the Tiles were almost certainly carried away to leave an even shield-shaped tumulus. There was no grave or other structure in this place. The object signaled by the monument was the house itself.

For an appreciable time thereafter the area of the circle was not encroached upon by other houses, though many bothroi were dug within its limits. The apse of the temporary structure found at this level in 1955 was precisely tangent to the eastern edge of the circle; House CU, a little later in date, lay near it on the southeast. The unexplained mass of yellow clay and the small walls discovered on the west side in 1954 (*Hesperia*, XXIV, 1955, p. 36) were also just outside the periphery. At least two or three generations must have passed before the general level of the surrounding ground had risen and the inhabitants began to build over the edges of the tumulus. Only in the developed Middle Helladic period, apparently, was the whole area reoccupied.

Whether the ruins of the House of the Tiles were treated with this extraordinarily elaborate attention as a mark of veneration or of execration we cannot at present even venture to guess.

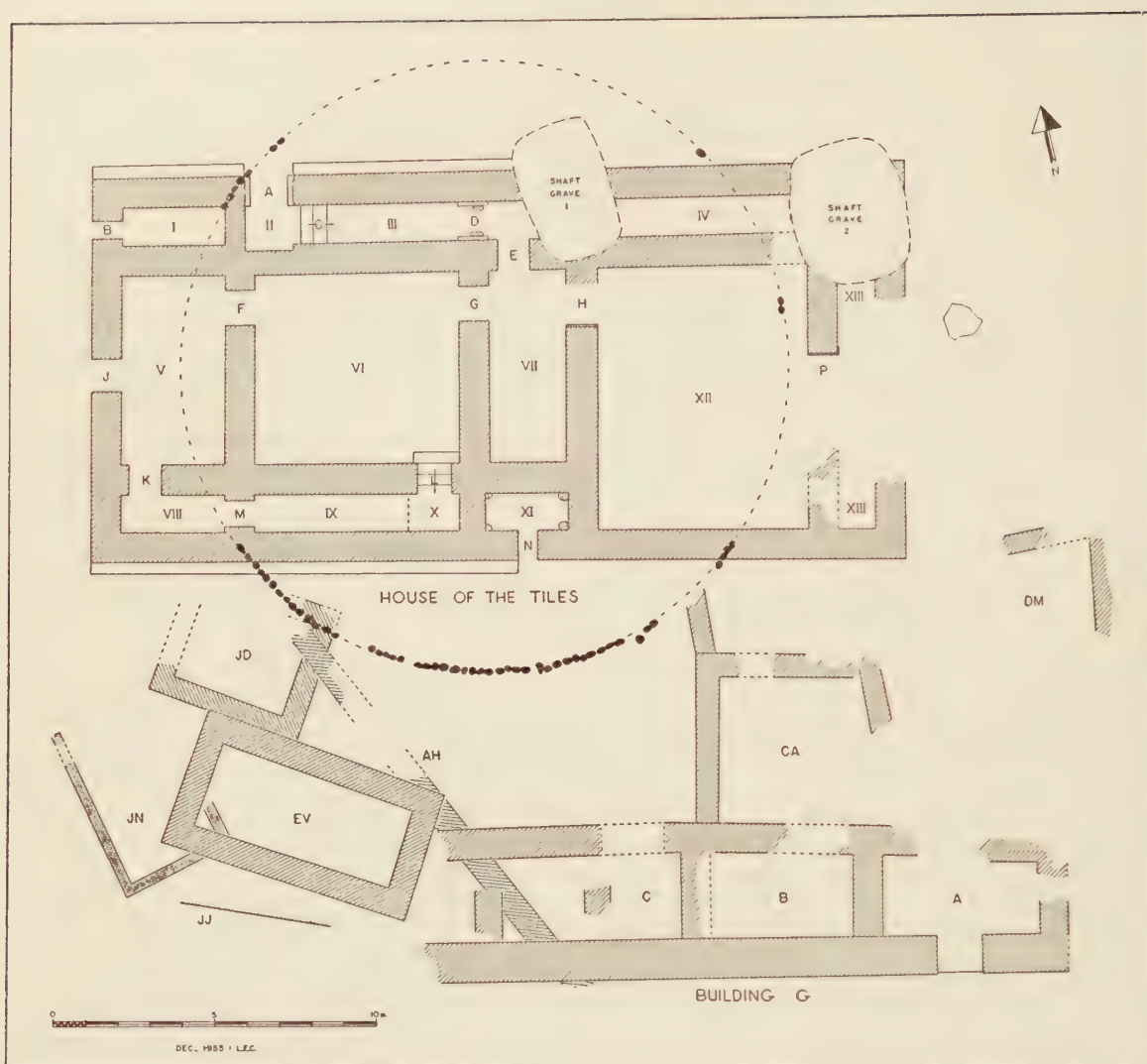


FIG. 5. Restored Plan of the House of the Tiles and Superposed Tumulus, Shaft Graves 1 and 2, and Buildings of the Early Helladic and Neolithic Periods on the South Flank of the Site.

Early Helladic Period, Early Phases

Remains of sizable buildings antedating the House of the Tiles, observed at various places in the preceding campaigns, were uncovered in 1955 throughout the southern part of the main area (Squares E-F 7, Fig. 1). The principal walls are shown schematically in Figure 5. They all lay below the hard-packed yellowish ground level onto which bricks, tiles, and burning ruins of the House of the Tiles had fallen. The pottery found with them confirms the stratigraphical division; unlike the assortment found in the later strata, e. g. in House CU as mentioned above, the earlier

fabrics comprise wares coated with black and brown glaze (*urfirnis*), a limited amount of red and brown slipped ware and fine yellow mottled ware,³⁹ and great quantities of plain wares, including the yellowish and pinkish-tan varieties appearing most characteristically in small bowls and saucers, and the darker brown and grayish types occurring chiefly in larger and coarser basins, jugs, and jars (Pl. 46, f-j). Vessels of the latter group frequently bear decorative plastic bands (Pl. 46, f) but not the fine slashed ridges of the final phases (e. g. Pl. 44, c). Patterned Ware of the standard type and "Smear Ware" are wholly lacking in the deposits earlier than the House of the Tiles.

Five or six of these early phases are represented by the architectural remains uncovered in 1955, but many of the walls, though broad and straight and well constructed, had been demolished to the lowest courses of their foundations. Floors and accompanying deposits had been lost or disturbed in the process, and some of the evidence thereby dispersed. The general sequence is clear, however, and proves that the period was a long one.

The latest of the houses in this series was EV, which interrupted the west end of Building G (Fig. 5). The eastern part of Building G, including Room A and the adjoining side of Room B, had been cleared in earlier campaigns (*Hesperia*, XXIV, 1955, pp. 43-45). Much of Room B was found to have been destroyed by military installations of the recent war. Room C was exposed in 1955. In its north wall there was a broad gap, probably a doorway; near this, in the central axis, lay a group of stones that had formed either a part of a north-south cross wall or an independent pier; further west was another group almost certainly representing a cross wall. The floor of Room C was not clearly distinguishable.

It seems probable that Building G was constructed in stages, first the broad south wall, then the walls of the compartments. Its full length cannot be ascertained, and the purpose it served is not apparent. During one or more phases of the Early Helladic settlement it formed the southern limit of the inhabited area. Immediately adjoining on the north was at least one house or room, CA. The floor of this room, around 4.50 m. A.T., showed signs of severe burning. Parts uncovered in 1953 and 1954 yielded a large group of pots and utensils (*Hesperia*, XXIII, 1954, p. 27; XXIV, 1955, p. 45). Further excavation has now revealed sections of the surrounding walls and, near the northeast corner, another patch of burnt floor, on which rested a small lid in plain ware, fragments of a large basin coated with a milky wash, nine obsidian blades, a conical whorl, and a cylindrical loomweight.

A short distance northeast of CA were the remains of another room, DM, also burnt and probably contemporary in date. Parts of its north and east walls were discovered and an isolated bit of wall further south may have belonged to the building, but

³⁹ C. W. Blegen, *Zygouries*, pp. 78-83.

the rest had been removed in succeeding phases, perhaps at the time of the House of the Tiles. The earthen floor, at an average level of 4.55 m. A.T., was found intact over an area of six or seven square meters near the northeast corner. On it was a thick deposit of burnt debris covering a mass of broken pottery and various implements. Postholes, stone supports, and charred remains of wooden uprights suggested that there had been shelves or racks beside the north wall, from which some of the objects may have fallen.

Among these objects are a knife blade and an unidentifiable fragment of copper or bronze; pieces of more than 40 obsidian blades; a flint blade; two stone hammers and two whetstones; a spatula and several awls and polishing implements of bone; four whorls and two weights of terracotta. Thirty pots from the floor have been inventoried, and others may be added to the list. They include saucers and small bowls wholly or partially coated with glaze paint; four sauceboats, a large askos, and a diminutive jar or pyxis with a plastic representation of a ram's head projecting from one side ⁴⁰ (Pl. 46, c), all in glazed ware; part of a miniature askos in yellow mottled ware; two saucers, one with raised base ⁴¹ (Pl. 46, b), and the neck of a large jar coated with a milky wash; a lid, two saucers, a jug ⁴² (Pl. 46, d), a large hydria ⁴³ (Pl. 46, i), and several large and small jars in various types of plain ware (e. g. Pl. 46, j ⁴⁴), some bearing bands or stripes of slightly shiny paint; and many vessels in sturdy coarse ware, large bowls (e. g. Pl. 46, f ⁴⁵) and basins (e. g. Pl. 46, g ⁴⁶), a jug ⁴⁷ (Pl. 46, h), three or more jars, two pithoi, and fragments of a baking pan. A number of the coarser pots are decorated with plastic bands. Several bear incised crosses (e. g. Pl. 46, a ⁴⁸); one of the deep rounded bowls is marked with a symbol like a two-pronged pitchfork ⁴⁹ (Pl. 45, f).

Charred grains of wheat were found in one of the jars, and near by on the floor were two small groups of figs, blackened and shrivelled but still quite recognizable. In and around the pots and scattered among the debris were more than 100 bits of clay sealings which, like those recovered a year before in Room XI of the House of the Tiles (*Hesperia*, XXIV, 1955, p. 41), had fastened the necks of jars or been applied to the surfaces of wooden and wicker containers. The seal impressions on the pieces from Room DM were, however, fewer in total number, simpler in design,

⁴⁰ Inv. L. 624; H. 0.068, D. 0.095.

⁴¹ Inv. L. 621; H. 0.06, D. 0.109.

⁴² Inv. L. 591; H. to spout 0.144, D. 0.143.

⁴³ Inv. L. 608; H. pres. 0.395, D. 0.37.

⁴⁴ Inv. L. 609; H. 0.315, D. 0.303.

⁴⁵ Inv. L. 605; H. 0.235, D. 0.307.

⁴⁶ Inv. L. 606; H. 0.20, D. 0.378.

⁴⁷ Inv. L. 604; H. 0.25, D. 0.23.

⁴⁸ Inv. L. 613; H. 0.13, D. 0.17.

⁴⁹ Inv. L. 612; H. 0.158, D. 0.189.

and much more limited in variety; only five types have been identified, as compared with 64 types listed by Miss Heath in the group from Room XI. Three of the five are illustrated on Plate 44: a tripartite design of interlocking spirals appears frequently with a small petal rosette, as in e) (Inv. L5.730), and an oval with hatched quadrants occurs alone, as in f) (Inv. L5.729). This pattern of hatching resembles in a general manner the design of another seal, found on the upper surface of the handle of an Early Helladic jar (Plate 44, d), which came to light near by in the debris outside the House of the Tiles. A similar type of decoration is found on raised bands that encircle the bodies of large pithoi (Pl. 44, a, b).⁵⁰ Like the sealings, these vessels were in use at the time of the House of the Tiles and in the phases immediately preceding.

The large closed groups of objects from Rooms CA and DM provide a valuable body of material that can be assigned with certainty to the stage of the Early Helladic settlement immediately preceding the construction of the House of the Tiles. Supplementary material will of course be added from contemporary deposits in other areas; a yellow askos of characteristic shape⁵¹ (Pl. 46, e), previously lacking in our collection, was found this year in Area J.

Next earlier in the sequence is Wall AH (Fig. 5), which runs diagonally across the western part of this area. It was found broken at several places but undoubtedly belonged to a single structure. The south end underlies and clearly antedates Building G, whereas a section toward the north crosses a still earlier building, JD. A relatively small amount of broken pottery has been collected from these strata. House JD, the northern part of which is still unexcavated, had a large rectangular stone platform at its southwest corner.

South of JD and under the west end of EV we came upon yet another complex, JF (not shown on the plan), which represents the earliest phase of the Early Helladic settlement preserved in this region. It comprised a group of walls running at different angles and varying in thickness and style of construction; evidently they had been altered and rebuilt more than once. A deep compartment went down into the underlying layer, reaching a floor level around 3.70 m. A.T. Even here, however, the pottery in general was of developed Early Helladic types.

Mixed Filling

Limits of the mixed deposits which were observed in Trench E in 1953 (*Hesperia*, XXIII, 1954, p. 28) and Trench J in 1954 (*Hesperia*, XXIV, 1955, pp. 46-47) began to be determined as the area of excavation expanded. The debris was characterized by alternating strata and patches of red, yellow, and brown earth and clay, containing

⁵⁰ Cf. K. Müller, *Tiryns*, IV, pls. XVI-XIX. Fragments from Lerna are quite as numerous and varied in pattern.

⁵¹ Inv. L.772; H. to rim 0.10, D. 0.134.

sherds of various Neolithic wares in great numbers as well as an appreciable quantity of Early Helladic pottery. As conjectured earlier, this must be material removed from some other part of the site during levelling operations and dumped here on the flank of the hill, presumably to create additional useful space. These operations were not, however, connected with the building of the House of the Tiles, as we first guessed, but must go back to a much earlier phase of the Early Helladic period.

The great mass of mixed filling rested, just south of Complex JF, on a hard red layer around 4.30 m. A.T. This red surface was found to be the top of a terrace of the Neolithic settlement, supported on the south by a retaining wall, JJ (Fig. 5). Our exploratory Trench E had been dug a short distance further south, missing the terrace and so probing down into the deepest mass of fill; at 1.35 m. A.T. it had not yet reached undisturbed ground. It thus becomes clear that in Neolithic times the southern boundary of the site, in this area at least, was an almost vertical embankment, which the Early Helladic settlers buried under the debris of their new installations.

Neolithic Strata

Much of the season of 1955 was occupied in clearing this southwestern corner of the main area and ascertaining the lines of division as outlined above. Plate 42, b shows the region at the end of the campaign, when there had been time for only a limited amount of digging in the undisturbed strata of the Neolithic settlement. This brief investigation began, nevertheless, to yield definite and reliable information.

Remains of three successive building levels were encountered, with floors in close sequence around 4.15 m., 4.05 m. and 3.85 m. A.T. The house walls had socles made up of small stones, rather carelessly fitted, in very marked contrast to the substantial masonry of the Early Helladic period. Enough was preserved, however, to show that these were rectangular buildings of moderate size. One of them, House JN (Fig. 5), had an interior width of just over 3 m. and was more than 5.25 m. long; the north end has not yet been revealed.

If the architecture is relatively humble in scale and execution, the pottery recovered from the floors and adjacent strata is of extraordinarily fine quality. As yet few vessels have been completely put together, but sherds and large fragments give an index of the types represented. Burnished and slipped wares occur in small quantities. The predominant fabric is a fine ware coated with lustrous red, brown, or orange glaze. A number of the pots were decorated with bold rectilinear patterns executed in the same glaze on a reserved ground. The principal shapes are cups, small bowls, and deep cylindrical or rounded jars. Most of the rims are plain, the upper part of the body being formed in a delicate single or double curve, the lower part often bending suddenly inward or having a fairly sharp angle. Cylindrical collar-like necks and bases are common. These wares and shapes find close parallels at

Corinthian and Arcadian sites; their relationship to the corresponding fabrics in central Greece is also evident but less immediate.⁵² Polychrome ware of the type found at Gonia and Prosymna has not come to light at Lerna up to now, nor is "Rainbow" or "Variegated" ware at all plentiful in the strata tested this year.

THE GEOMETRIC CEMETERY

Graves had been revealed on the lower slopes of Mt. Pontinos, a short distance beyond the southernmost houses of the village of Myloi (Pl. 48, a), when a broad deep ditch was dug there by the occupying forces during the second World War. In 1955 C. W. J. Eliot made a preliminary exploration of the region, excavating with four workmen for five days. He cleared 15 graves, most of which were near the surface or already partly exposed, and noted places where others undoubtedly lie. Ten of the 15 graves were cists built of flat slabs of stone, the rest pithos burials. All are probably assignable to the Geometric period, although half a dozen Middle Helladic potsherds and one or two of earlier date were found in the area.

The cist graves were made up of irregular slabs, large and small, set vertically, and were covered with other flat stones. Average dimensions of the graves were about 0.55 m. by 1.25 m. In most cases the body was placed in the cist with legs slightly drawn up, but a few of the skeletons were fully extended. No offerings were found in the graves of this type. Near one of them, which had been disturbed by the war trench, there were a few sherds of Early Geometric pottery. Lines of stratification in the bank of the trench made it appear that a small tumulus of earth had been heaped over this grave.

The pithoi used as burial vessels were large ovoid jars with a thick rim and a stubby foot. Some had horizontal plastic bands around the body. They varied in height from 0.95 m. to 1.30 m. and were laid horizontally, with stones propping them on either side and flat slabs covering the mouths. A great many fragments of Early Geometric pottery were found around the lower ends of two of these pithoi, presumably the remains of offerings made at the time of burial. One group of sherds showed signs of burning, though the body had apparently not been cremated.

The smallest of the pithoi, PA6.1, was partially exposed and damaged by the military trench but retained a group of funeral offerings in place (Pl. 48, b). The skeleton had almost entirely dissolved, only a few small teeth remaining to indicate that a young child had been buried here. The offerings included five Late Geometric

⁵² The glazed ware at Lerna is of the class often called Neolithic "Urfirnis-ware"; Mrs. Kosmopoulos named it "Corinthian Brown Ware." Pieces illustrated in her publication *The Pre-historic Inhabitation of Corinth*, I, pl. I, b, and pl. II, a, are paralleled by many examples from Lerna, as are the shapes shown by S. S. Weinberg in *Hesperia*, VI, 1937, pp. 487-524, figs. 9, 13, and 16. For the patterns cf. also E. J. Holmberg, *The Swedish Excavations at Asea in Arcadia*, pl. III.

pots of characteristic Argive fabric: a kantharos ⁵³ (Pl. 48, c), a skyphos with twisted handles ⁵⁴ (Pl. 48, d), a one-handed cup ⁵⁵ (Pl. 48, f), a trefoil oinochoe ⁵⁶ (Pl. 48, g), and a handmade undecorated jug with a wide mouth ⁵⁷ (Pl. 48, e). In addition, there were a few objects of bronze: several scraps, pieces of two wire hoops, two small rings made of flat bands with zigzag chasing on the outer surface, and a well preserved fibula ⁵⁸ (Pl. 48, h). On either side of the catch-plate this bears a delicately incised representation of a water bird, one with its head forward, the other with its head turned, looking over its back. ⁵⁹

SUMMARY

The campaign of 1955, following the ground work of a more exploratory character that had been accomplished in preceding seasons, furnished much new information about the architecture and topography of Lerna, as well as adding very substantially to the collection of pottery and miscellaneous objects. ⁶⁰

Investigation of the Neolithic settlement has only begun, but the discovery of houses and floors in stratified sequence makes this beginning appear auspicious. The houses seen this year were rectangular and their walls rested on stone foundations, facts not surprising in themselves but of considerable interest in view of our very limited knowledge of Neolithic architecture in the Peloponnesos. The relative date of these houses cannot yet be fixed with confidence. Being at the top of the layer, and immediately below a filling that was placed there by inhabitants of the Early Helladic settlement, they would appear to represent a late phase of the Neolithic period, but it is quite possible, and even probable, that still later Neolithic strata were cut away altogether in the course of ancient levelling and grading operations. Efforts will be made to find pertinent evidence through more extensive and deeper digging next season.

The most significant results of our latest investigations in the Early Helladic layer are the discovery of the long series of big solid structures antedating the House of the Tiles, the fixing of the whole general plan of that building itself, the recognition of the monumental tumulus that was erected over its ruins after the catastrophic fire, and, of utmost archaeological importance, the clear indications gained of a cultural

⁵³ Inv. L.669; H. 0.125, D. 0.185.

⁵⁴ Inv. L. 670; H. 0.131, D. 0.211.

⁵⁵ Inv. L.668; H. 0.043, D. 0.077.

⁵⁶ Inv. L.671; H. 0.12, D. 0.097.

⁵⁷ Inv. L.667; H. to rim 0.095, D. 0.085.

⁵⁸ Inv. L.5.564; L. 0.10.

⁵⁹ For the type cf. R. Hampe, *Frühe Griechische Sagenbilder in Böotien*, pls. 6-17; pl. 13, no. 17 shows a style of decoration very close to ours.

⁶⁰ At the present writing (February, 1956) the inventory of pots has reached the number 795, while the miscellaneous objects total 2134.

change that accompanied or immediately succeeded that event. There is an unmistakable contrast between the pottery from Houses CA and DM, of the earlier phase, and, for example, that of House CU, which belonged to the later. The distinction has been emphasized and illustrated in the foregoing account.

This change occurred before the end of the Early Helladic period. Pottery and artifacts of Middle Helladic types do not occur in the stratum associated with House CU. They begin to appear one or two or even three phases later, and at first in such infinitesimal quantities that their presence may perhaps be due to intrusions from above. Only gradually, so far as we have yet been able to observe, do the Middle Helladic fabrics become dominant; and not mere sherds but an appreciable number of whole pots in characteristic Early Helladic wares occur persistently in the deposits of this stage of transition, if such it ultimately proves to be. The case is by no means clear, particularly since houses with apsidal ends, of typically Middle Helladic form, seem to occur earlier than the phases in which Middle Helladic pottery is plentiful.

Conclusions drawn from this evidence would be premature in the present state of the investigations, but enough material has now been collected to make it apparent that the history of Lerna may have differed somewhat from that of other sites in the region. As proved by the excavations of Wace and Blegen and others, many settlements suffered general destruction and burning at the end of the Early Helladic period and, if resettled at all, showed a different cultural aspect thereafter. From this fact, however, it does not necessarily follow that events occurred everywhere in the same pattern. One might guess, for example, that in some instances the newly arrived people may not have met resistance but may rather have been induced to join peaceably with the older inhabitants in occupying a favorable site. Such may have been the case at Lerna.

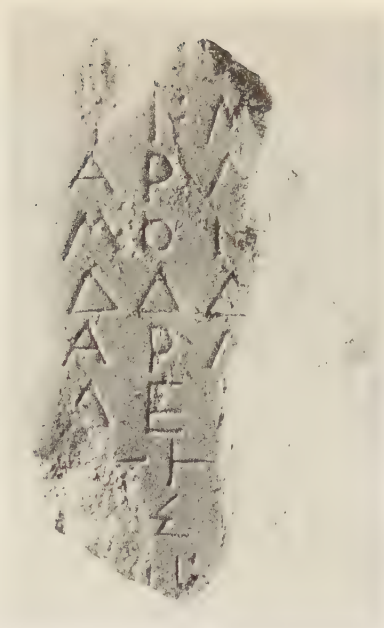
In time the Middle Helladic stock quite evidently superseded the earlier people here, and, as has been reported, they remained through many successive generations. During this period, not less than before, relations were maintained with other centers, notably the Minoan and Cycladic. Toward the close of the Middle Bronze Age burials on the site itself increase in number, though in the highest strata still preserved house walls and floors continue to occupy most of the area. Ultimately the place was used for mighty shaft graves, two of which have now been discovered, implying the presence of some rich and powerful personages. Unhappily the topmost layers of the mound have been so thoroughly denuded that architectural remains of this period no longer exist. Only in isolated pockets have we found remains of later Mycenaean habitations, and evidences of subsequent occupation in the historical periods, although clear enough in their implications, are now meager and still more scattered.

JOHN L. CASKEY

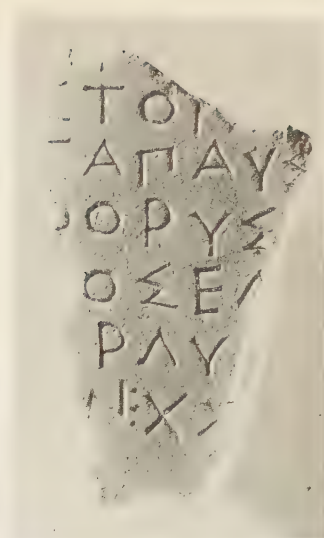
AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS



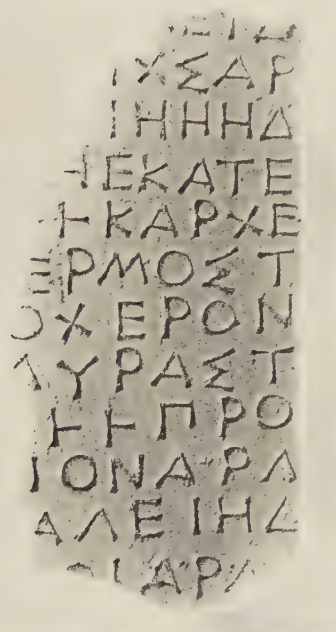
No. 1, Face A



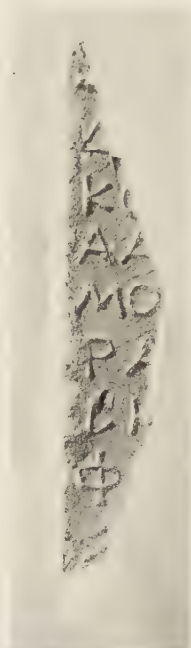
No. 1, Face B



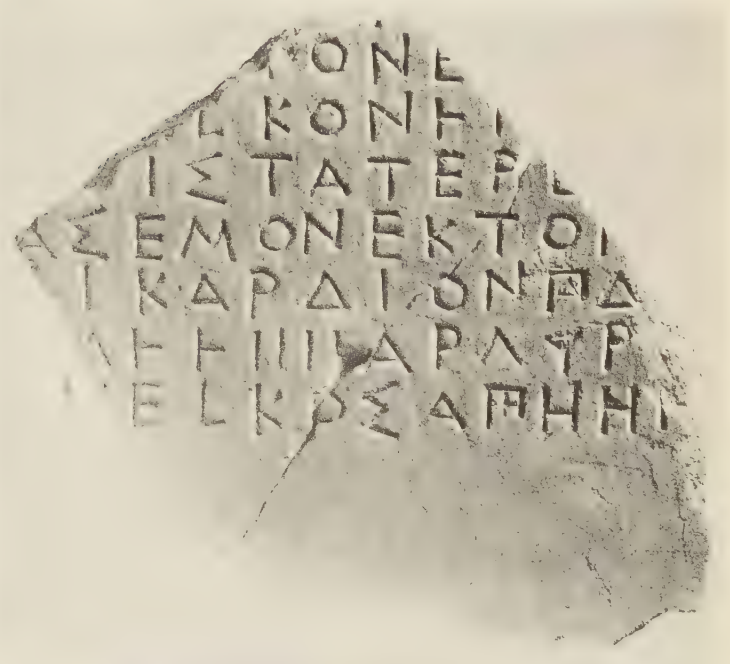
No. 4



No. 2, Face A



No. 2, Face B



No. 3



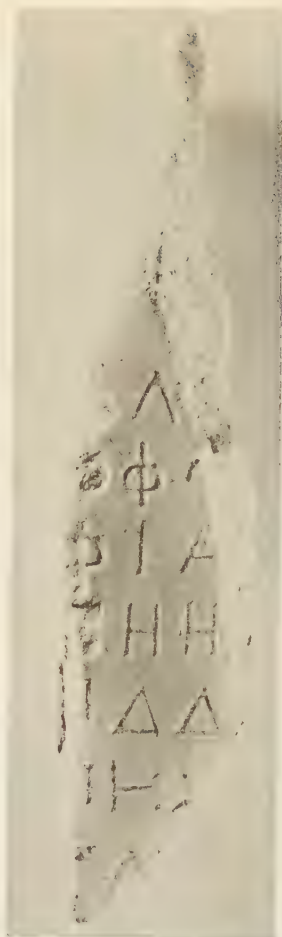
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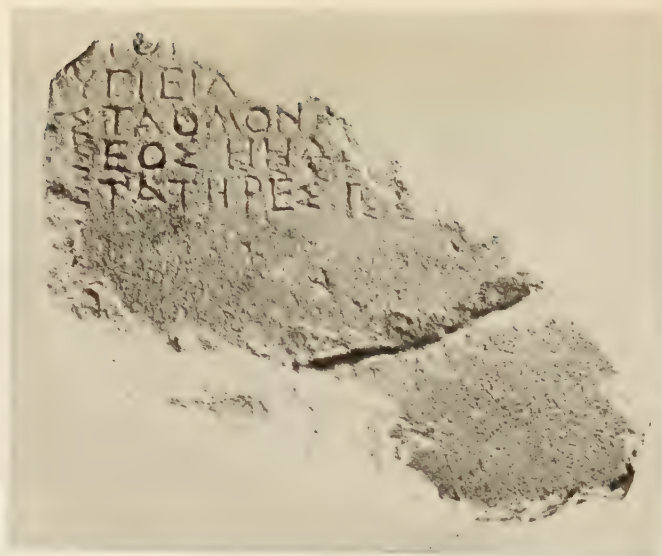
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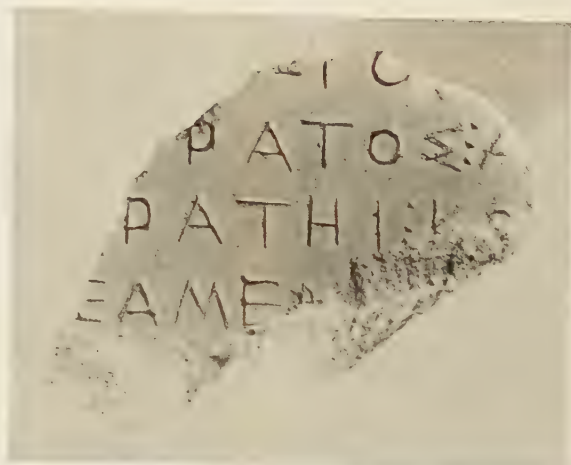
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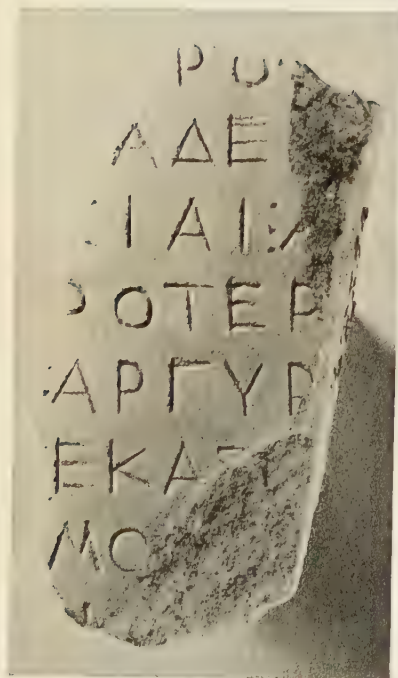
No. 9a



No. 8



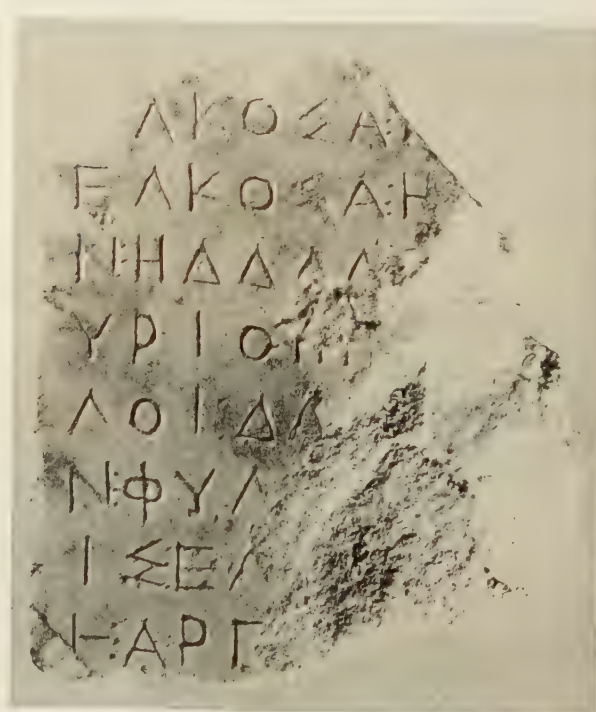
No. 9c



No. 9b



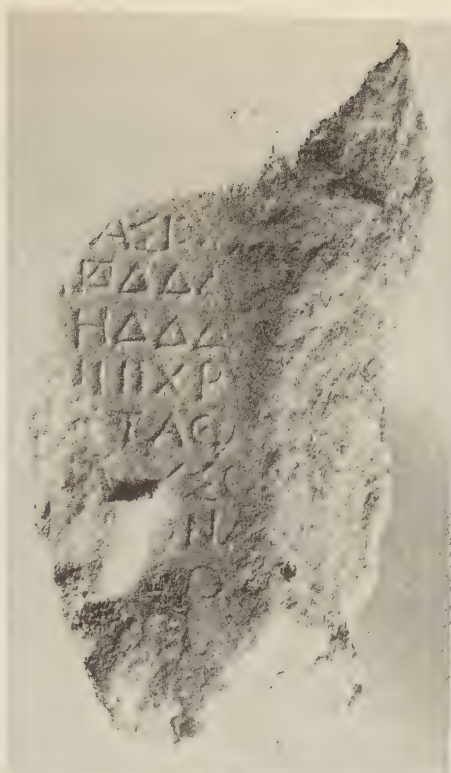
No. 9d, Face B



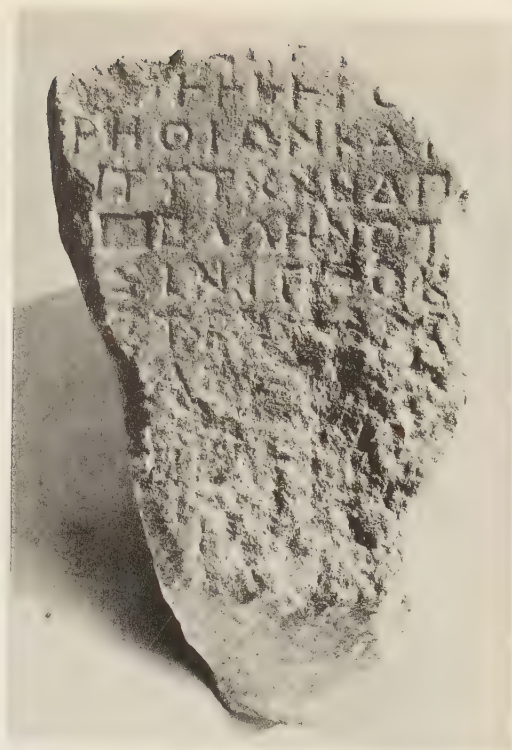
No. 9d, Face A



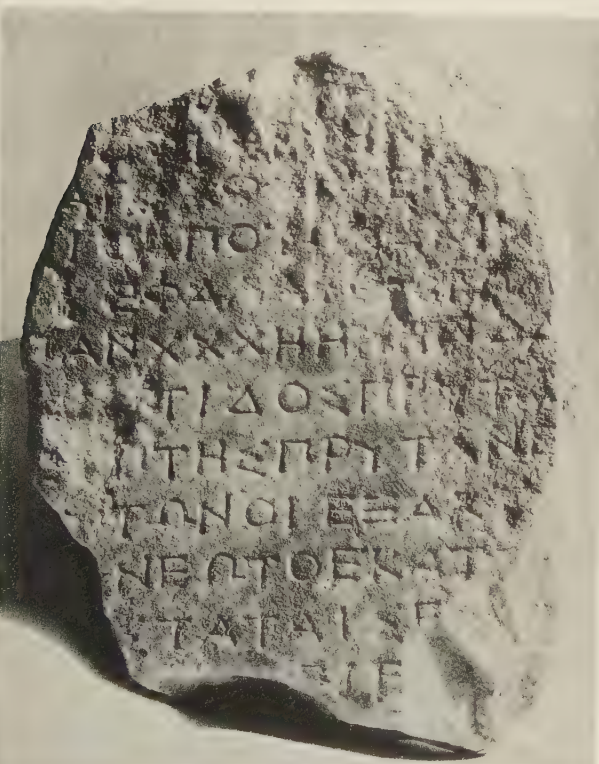
No. 10, Face A



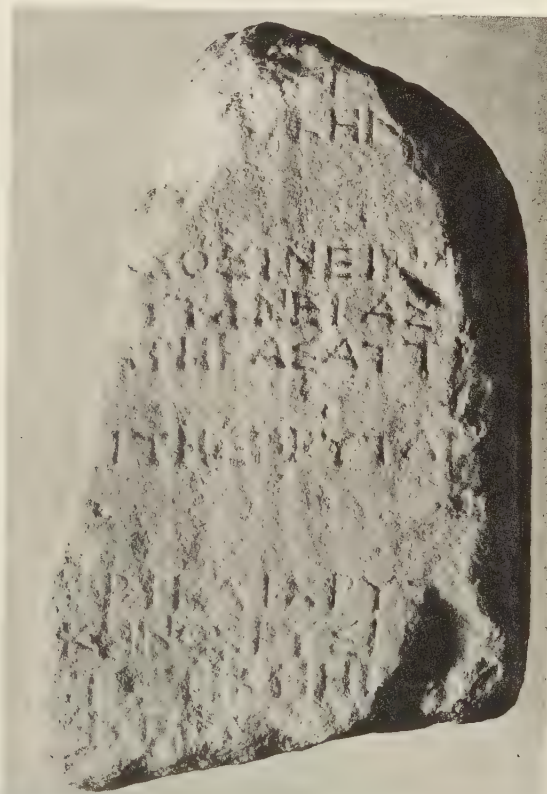
No. 10, Face B



I. G., II², 303



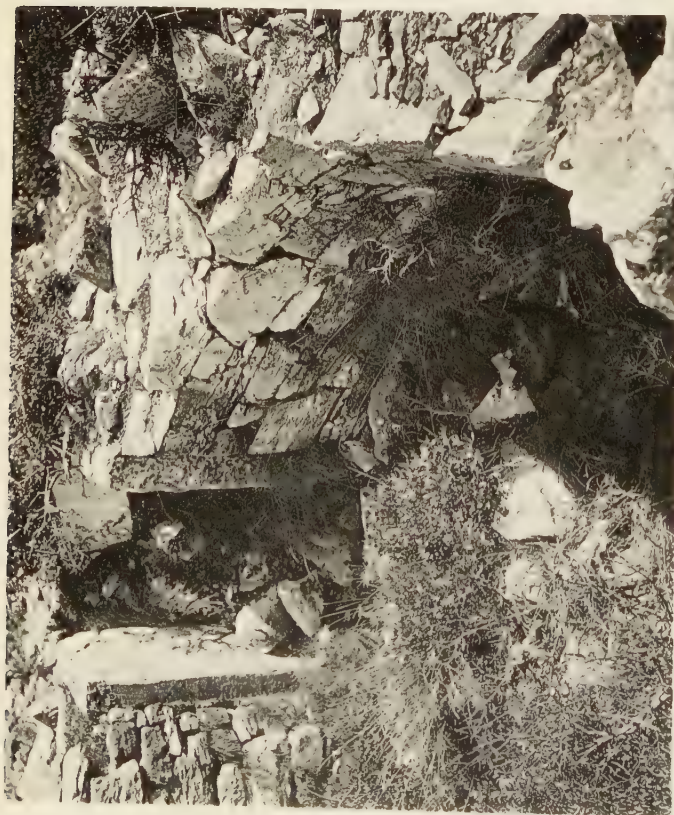
I. G., II², 1686*b*



I. G., II², 1687*a*



I. G., II², 1687*b*



a. The Princess Tower (Sounion 1) : Interior, showing Doorway



c. The Princess Tower (Sounion 1) : Detail of Court Wall



b. The Princess Tower (Sounion 1) : North Wall of Court, from outside



a. The Cliff Tower (Sounion 2) : Detail of South Wall of House



c. The Golden Pig Tower (Sounion 3) : South Wall.



b. View from Cliff Tower (Sounion 2) : To left, Threshing-floor



d. The Golden Pig Tower (Sounion 3) : Detail of South Wall at West Corner



a. The Yellow Tower (Sounion 4) : Northwest Wall



b. The Yellow Tower (Sounion 4) : View within, from Door



c. The Red Tower (Sounion 5) : View of East Wall, with Outbuilding



d. The Red Tower (Sounion 5) : View of Doorway, from within



a. The Red Tower (Sounion 5) : Plastered Back Wall, from within



b. The Red Tower (Sounion 5) : Broken end of Outbuilding Wall, over Cemented Channel



c. The Hilltop Tower (Sounion 6) : South Wall (to left, Corner; to right, Doorway)



d. The Hilltop Tower (Sounion 6) : View from West



a. House of the Pithos and Contemporary Stratum, from North



b. Wall CL with Gateway, from North



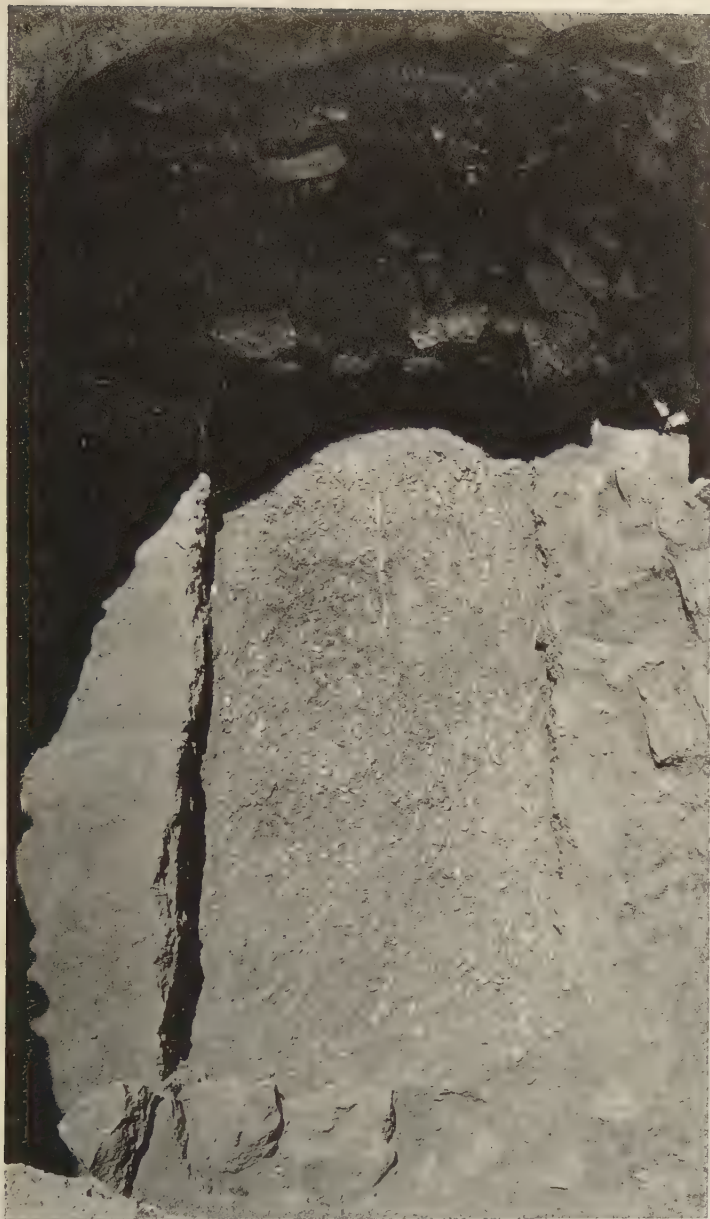
c. House CV, Walls CU and CX, from North



d. Part of House DA and Associated Level, from North



e. Six Meters of Deposits from Present Surface to Water Level, seen from Southeast



a. Shaft Grave 2, from North



b. Plain Cup from Filling of Grave Shaft (2:3)



c. Calf's Head from Filling of Grave Shaft (4:5)



d-e. Matt-painted Cups from Floor of Grave (3:5)



a. Grave BC.3 with Cover Slabs in Place, from North



b. Grave BC.3 with Western Slab Removed, from West



c. Matt-Painted Cup Found on Cover of Grave BC.3 (2:5)



d. Jug in Reddish-buff Ware from Grave BC.3 (2:5)



e. Grave J.2 with Double Interment



a. Middle Helladic Oven or Kiln, from East



b. Burnt Debris over House 98A, from West



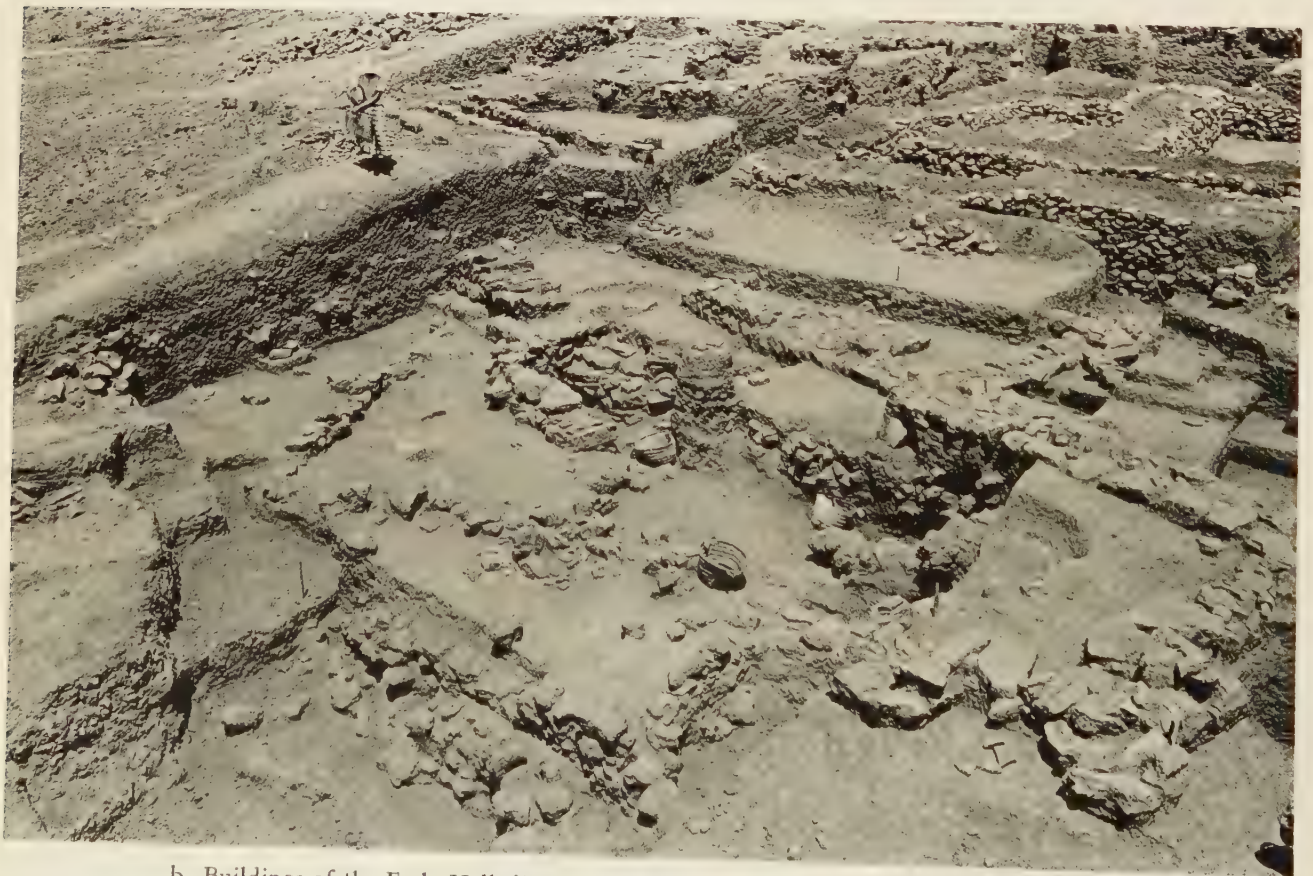
c. House 98A, from North;
Shaft Grave 2 at Right



d. Large Apsidal Building in Squares F-G 6-7, from East



a. West End of House of the Tiles from South. Part of Circle of Stones in Foreground



b. Buildings of the Early Helladic and Neolithic Periods in Square E 7 at the End of the Campaign of 1955, from Southeast



a. Fragment of Jug in Kamares Style (1:1)



b. Black Burnished Flask from Middle Helladic House 98A (2:3)



c. Imported Middle Minoan Cup (2:3)



d. Strainer or Brazier (1:2). Early Helladic Period, Late Phase



e. Brown Bowl (1:4). Early Helladic Period, Late Phase



f. Vessel with Three Spouts from House CU, Square F 7, Partially Restored (ca. 1:12)



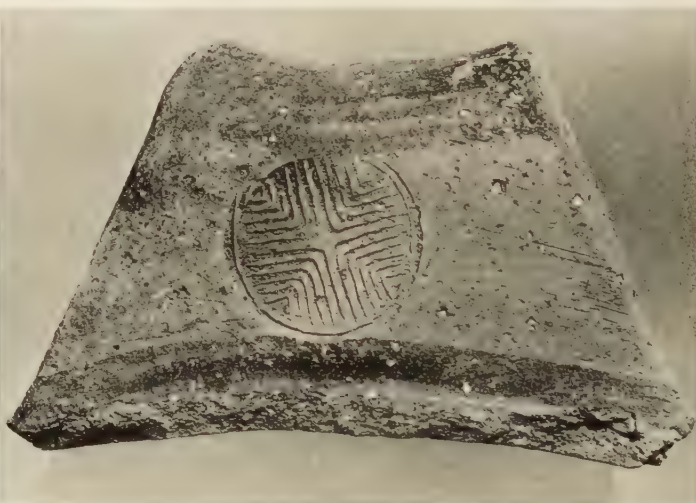
a. Pithos Fragments, Contemporary with the House of the Tiles (1:3)



b. Fragment from Stratum Preceding the House of the Tiles (3:5)



c. Fragment of Large Jar from Late Stratum of Early Helladic Settlement (1:2)



d. Seal Impression on Handle of Jar, Roughly Contemporary with House of the Tiles (2:3)



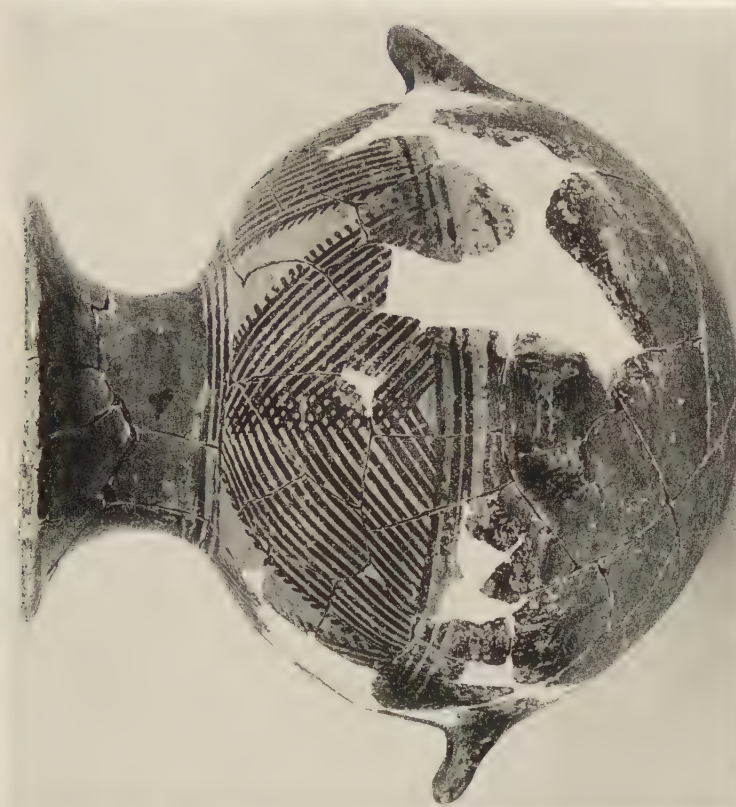
e. Clay Sealing L5.730 from Room DM, Square F 7 (4:5)



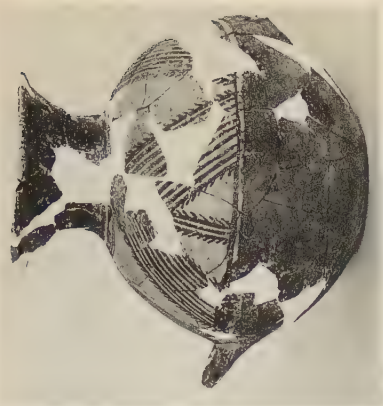
f. Clay Sealing L5.729 from Room DM, Square F 7 (2:3)



a. Bowl with Pedestal from House CU, Square F 7 (1:2)



b. Jar from House CU, Square F 7 (1:3)



c. Jar from House CU, Square F 7 (1:7)



d. Jug (1:4)



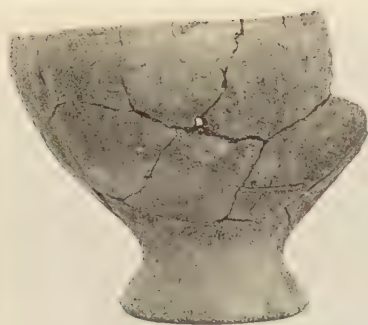
e. Fragmentary Jar (1:4)



f. Bowl in Coarse Ware from Room DM (2:5) and Detail of Graffito



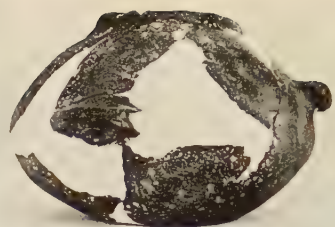
a-e
Early Helladic
Patterned Ware
from Strata succeeding
Destruction of the
House of the Tiles



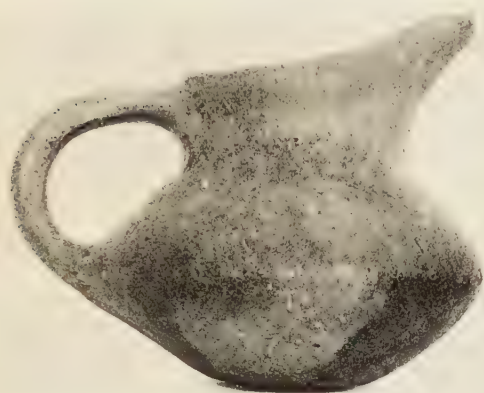
a. Bowl in Coarse Ware with Incised Cross (1:3)



b. Saucer with Raised Base (2:5)



c. Pyxis in Glazed Ware (2:5)



d. Jug in Plain Ware (2:5)

a-d, f-j
Pottery from
Room DM,
Square F7,
Antedating
House of the
Tiles



e. Yellow Askos from Area J (1:2)



f. Deep Bowl in Coarse Ware (1:4)



g. Basin in Coarse Ware with Painted Rim (3:10)



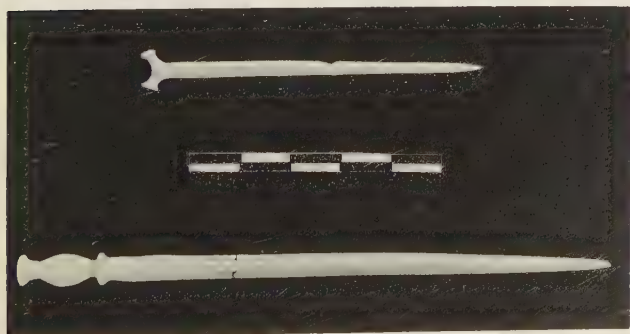
h. Jug in Coarse Ware (1:5)



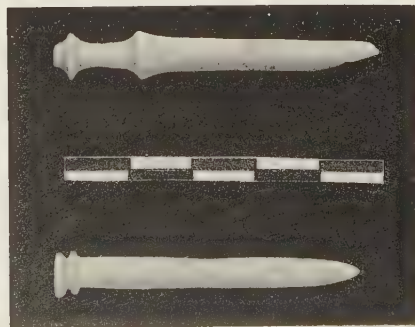
i. Hydria in Plain Ware (1:7)



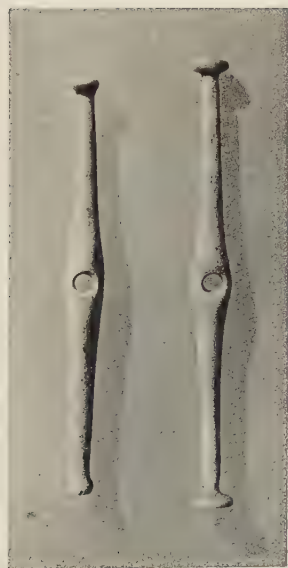
j. Jar in Plain Ware with Bands (1:7)



a-b. Middle Helladic Bone Pins



c-d. Middle Helladic Bone Pins



e-f. Early Helladic Bone Toggles (4:5)



g-h. Bead and Pendant of Dark Gray Steatite (3:4)



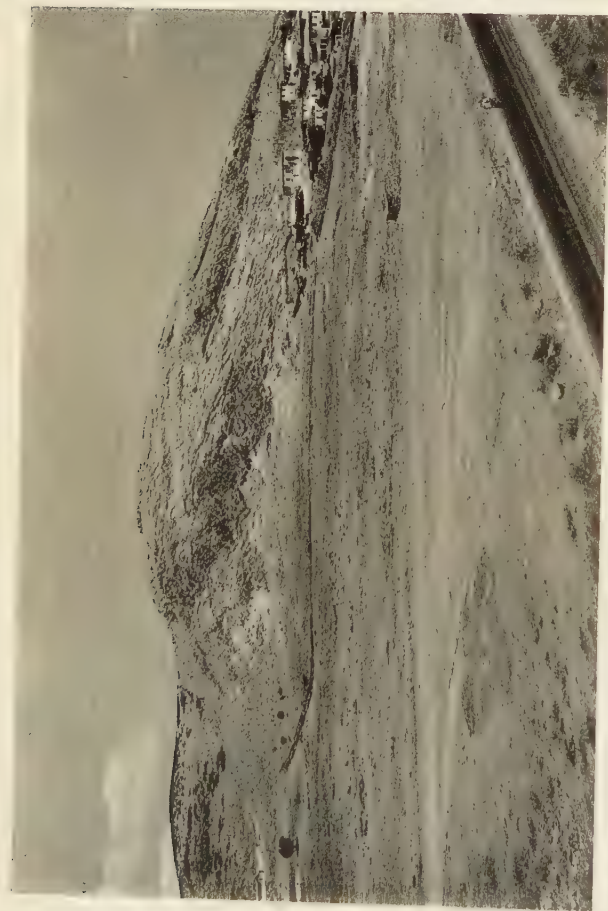
i. Fragmentary Marble Cup, probably from the House of the Tiles



j-k. Terracotta Figurines from Late Phase of Early Helladic Settlement



l-p. Anchor-Shaped Objects of Terracotta from Late Phase of Early Helladic Settlement (3:5)



a. Mt. Pontinos and Area of the Geometric Cemetery, from Southeast



b. Grave PA6.1 with Offerings in Place



c-d. Kantharos and Skyphos from Grave PA6.1 (1:4)



e-g. Jug, Cup, and Oinochoe from Grave PA6.1 (1:4)



h. Bronze Fibula from Grave PA6.1 (2:3)

JOHN L. CASKEY AND MARY ELIOT: A NEOLITHIC FIGURINE FROM LERNA



A NEOLITHIC FIGURINE FROM LERNA

(Frontispiece)

SUCCESSIVE strata of the Neolithic settlement at Lerna were tested in depth over an extensive area in the course of the American School's excavations during the early summer of 1956. The three topmost building levels had been recognized in the preceding campaign.¹ This year some five others, belonging apparently to phases of the same cultural period, were cleared one after another; and below them a still deeper series of accumulations, different in character, was removed in turn, down to virgin soil and the level of standing water. The maximum total thickness of these Neolithic deposits was 3.75 m. (from 4.37 m. to 0.62 m. above sea level).

A terracotta figurine of more than usual interest was found among fallen debris of the third stratum from the top.² It is a representation of a standing nude woman, lacking the head and the lower part of the right leg, worn in places and slightly chipped, but preserved nonetheless in remarkably good condition (Frontispiece).³

The figure stands erect in an easy and graceful pose, arms resting across the thorax. There is no indication of the shape of the head; chipping below the nape of the neck may possibly indicate that a lock of hair hung down at the back, but this is uncertain and, from the form of the break, rather doubtful. The shoulders are rounded and slope naturally into plump upper arms. The forearms, bent slightly upwards, are also full but distinctly smaller; they are flattened where they meet at the tips, without indication of hands. The breasts, high on the chest and widely but not unnaturally separated, are small and triangular, depending only a little. At the middle of the body the waist narrows and the abdomen swells in a broad gentle convexity, under which

¹ "Excavations at Lerna, 1955," *Hesperia*, XXV, 1956, pp. 170-171. Further information about the Neolithic strata and associated pottery and other objects found in 1956 will appear in a later number.

² Inv. L6.100. Max. H. pres. (neck to left foot) 0.182; max. W. (at upper arms) 0.0705; W. at waist 0.044; W. at hips 0.062; W. at mid-point of legs 0.056; max. Th. (top of thigh to buttocks) 0.037; Th. at breast 0.03; Th. at waist 0.026; Th. at mid-point of legs 0.028. Head, lower part of right leg, and most of left foot missing, as well as chips from breasts, left upper arm, right forearm, back of shoulders below nape of neck, left hip, and parts of legs. Surface worn on shoulders, breasts, abdomen, thighs, upper part of back, and buttocks.

Biscuit fine with very few impurities and occasional specks of mica; compact, solid, heavy, fired hard; light pink-buff, grayish at core and brownish near surface; slight blackening on right arm and left leg. Surface firm, originally all coated with red slip (verging toward orange-brown); burnished to a high luster. The legs were built upon cylindrical cores, ca. 0.02 m. in diameter, around which a thick coating of clay was applied and modelled. Marks of paring and polishing visible.

³ We would thank Miss Alison Frantz for the photographs here reproduced.

there is a curving depression that rises and flattens out near the hips. The navel is not indicated. The surface of the lower abdomen, resting upon the pelvic case, is also very slightly convex. This is set off from the thighs by deep grooves slanting upward to the hip line from the mid-point, where they join the more pronounced median groove that divides the legs. A vertical incision indicates the sexual part, without elaboration. The legs are long, full, and tapering, nearly round in section, and they lack any sign of articulation at the knees. They were joined together from the fork to a point not far above the feet. At the ankle and foot the separation was evidently slight; the legs certainly did not splay outwards. The feet were probably no more than brief spreading pedestals.

The back of the figure is even more striking than the front. Its upper part is nearly flat, hollowed very gently toward the median line, and tapering toward the waist. The upper arms are deeply undercut, making it appear that they are nearly free of the body. On the right side there is a low convex ridge running vertically, parallel with the upper arm, and at the level of the elbow a short horizontal ridge, made by the application of a small roll of clay. On the left, traces of a corresponding horizontal ridge can be detected, but it is much less pronounced.⁴ The most remarkable feature of the entire statuette is the sensitive and lifelike modelling of the lower back with its transition to the curves of the hips and buttocks. This plastic quality is seen best in the rear view or from a quartering angle; the side view is less satisfactory because it emphasizes the contrast with the chest and thorax, which are disproportionately shallow from front to back. The buttocks swell outward and are undercut below. They are divided by a vertical incision, not quite straight, and the line is continued downward by the groove that separates the legs.

Texture and color of the clay, fabric, modelling, and style all indicate that the statuette was locally made. Certain characteristics link it with the large class of Neolithic standing figures found throughout Greece and the Aegean region, but in its entirety it is, to the best of our knowledge,⁵ unique. It was presumably made as a symbol of fertile femininity, perhaps a fetish (since it was evidently handled repeatedly over a considerable period of time), yet the craftsman was not content to achieve his aim in the usual manner by fashioning an image of monstrous steatopygy and an exaggeration of the generative parts. Up to a point he accepted the traditional pose of the arms, which cross the body in the general manner known from many examples in Thessaly and elsewhere,⁶ but he used it solely for its decorative effect, not as a

⁴ These may represent rolls of fat (cf. e. g. Tsountas, *Dimini and Sesklo*, pl. 32, 2), though such are notably lacking in other parts of the body; or possibly some abnormality (*ibid.*, pl. 33, 1).

⁵ The present account is not an exhaustive treatment of the subject; we intend later to offer a more comprehensive study with comments on the chronological evidence.

⁶ Cf. Tsountas, *Dimini and Sesklo*, pl. 32, 1-4, and a similar example from Chaeronea, Wace and Thompson, *Prehistoric Thessaly*, fig. 141, d. A still earlier and more distant parallel is found in

means of emphasizing the nurturing breasts. The rendering of planes and curves and transitions in the mid-section of the body is equally remarkable in its originality, surprising the observer into involuntary comparisons with classical realism, and the proportions of the lower body and legs, for all the lack of detail, suggest parallels with archaic Greek sculpture.⁷ One cannot escape the conclusion that he was in some measure an artist and sculptor in our sense of the words, consciously aware of natural beauty and capable of rendering it in three-dimensional form.

JOHN L. CASKEY
MARY ELIOT

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

a figurine of the Badarian period in Egypt, published by G. Brunton and G. Caton-Thompson, *The Badarian Civilization and Predynastic Remains Near Badari*, pls. XXIV, 1 and XXV, 6, 7.

⁷ Comparable attention to anatomical rendering in an early figure of very different aspect is seen in the "Venus of Malta," L. M. Ugolini, *Malta*, figs. 27-29.

THE ATTIC STELAI

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GENERAL INTRODUCTION

THE Attic Stelai comprise a group of inscriptions recording the sale of items of personal property confiscated from Alkibiades and other condemned men, who were accused of mutilating the Hermes and profaning the Eleusinian mysteries in 415/4 B.C. In Part I of this study, published in *Hesperia*, XXII, 1953, pp. 225-299, were presented the texts of the Attic Stelai, together with a commentary, largely epigraphical in nature. In Parts II and III the authors offer an interpretation of the individual items, with a discussion of the prices where these are preserved. Because of the broad scope of the material, it has been deemed best to divide it. Part II, presented herewith,¹ concerns all of the items except the containers, vases and other, which will be treated separately as Part III by Professor D. A. Amyx in a subsequent fascicle of this *Journal*. Part II is followed by an *addenda et corrigenda* to the

¹ The completion of this study was made possible by a generous grant in aid of travel by the American Philosophical Society (Penrose Fund). The Committee on Research of the University of California assisted me with a grant to pay the expenses of a research assistant, Dr. Anne Pippin, to whom I am particularly indebted in the section on furniture. The study itself was instigated largely by Professor Homer A. Thompson, and would not have been undertaken or completed without his encouragement and that of Miss Lucy Talcott. Both have read the manuscript, and I am

Greek texts, incorporating the changes made in Parts II and III. This is in turn followed by an appendix by Dr. Anne Pippin dealing with Pollux, Book X, wherein some thirty-four items of the Attic Stelai are collected. At the end of Part III, the two authors will present an index to the Greek words from the Stelai discussed in Parts II and III.

An examination of each word has been made, taking into consideration its meaning and often its etymology, and its significant occurrences in ancient literature and on other inscriptions; and an effort has been made to identify it with objects repre-

grateful to both for many fruitful suggestions and criticisms. Professor D. A. Amyx, in preparing Part III, has been able to shed light on many of my problems. I owe heartfelt thanks to Miss A. Kokoni for her devotion to the difficult task of typewriting the manuscript. Finally, my deepest obligation is to my wife, who has helped me to form my thoughts at every stage.

For references cited frequently the following abbreviations are used:

- Andreades, *Hist. of Gr. Pub. Finance* = A. M. Andreades, *A History of Greek Public Finance* (tr. by Carroll N. Brown), Cambridge, Mass., 1933.
- Bekker, *Anecd.* = J. Bekker, *Anecdota Graecae*, Berlin, 1814.
- Blümner, *Technologie* = H. Blümner, *Technologie und Terminologie der Gewerbe und Künste*, Vol. I, 2nd ed., Leipzig and Berlin, 1912; Vol. II, Leipzig 1879; Vol. III, Leipzig, 1884; Vol. IV, Leipzig, 1887.
- Böckh, *Staatshaushaltung der Athener*³ = A. Böckh, *Die Staatshaushaltung der Athener*, 3rd ed. by M. Fränkel, Berlin, 1886.
- Boisacq, *Dictionary*⁴ = E. Boisacq, *Dictionnaire étymologique de la langue grecque*, 4th ed., Heidelberg, 1950.
- Buck, *Dictionary* = C. D. Buck, *A Dictionary of Selected Synonyms in the Principal Indo-European Languages*, Chicago, 1949.
- Buck and Petersen, *Reverse Index* = C. D. Buck and W. Petersen, *A Reverse Index of Greek Nouns and Adjectives*, Chicago, 1945.
- Cloch , *Classes*, etc. = P. Cloch , *Les classes, les m tiers, le trafic*, Paris, 1931.
- Day, *Ec. Hist. of Athens* = J. Day, *An Economic History of Athens under Roman Domination*, New York, 1942.
- Ebert, *Fachausdr cke* = F. Ebert, *Fachausdr cke des griechischen Bauhandwerks*, W rzburg diss., 1910.
- Economic Survey* = T. Frank, *Economic Survey of Ancient Rome*, Vols. I-V, Baltimore, 1933-1940.
- Ehrenberg, *People of Aristophanes*² = V. Ehrenberg, *The People of Aristophanes*, 2nd ed., Oxford, 1951.
- Jard , *C r ales* = Jard , *Les c r ales dans l'antiquit  grecque*, Paris, 1925.
- Michell, *Ec. of Anc. Greece* = H. Michell, *The Economics of Ancient Greece*, New York and Cambridge, 1940.
- Olynthus* = D. M. Robinson, *Excavations at Olynthus*, Baltimore, Vol. VIII (with J. W. Graham), 1938; Vol. X, 1941; Vol. XII, 1946.
- Ransom, *Couches and Beds* = C. L. Ransom, *Studies in Ancient Furniture, Couches and Beds of the Greeks, Etruscans and Romans*, Chicago, 1905.
- Rostovtzeff, *Soc. and Ec. Hist. of Hell. World* = M. Rostovtzeff, *The Social and Economic History of the Hellenistic World*, Oxford, 1941.
- Schwyzer, *Gr. Gram.* = E. Schwyzer, *Griechische Grammatik*, Munich, Vol. I, 1939; Vol. II, 1950.
- Tod, *Gr. Hist. Inscr.* = M. N. Tod, *Greek Historical Inscriptions*, Oxford, Vol. I, 2nd ed., 1946; Vol. II, 1948.

sented on vases or found in excavations. Where objects had previously been so identified, a reference to the pertinent literature has sufficed. Unfortunately, most studies of objects have been limited mainly to archaeological evidence, with little thought for the philological aspects. A standard work on Greek furniture, for example, makes no effort to canvass the literary material or to bring the objects together with their Greek names. And indeed, the gap between archaeology and philology has proved a very difficult one to bridge.

Where prices have been preserved on our Stelai, they have been compared with any other ancient prices which the writer could collect. Because of the lack of indexes to much of the vast epigraphical material, no claim can be made to completeness, although it can truly be affirmed that the present work includes many prices which have not appeared in previous economic studies. There is obviously need for a general evaluation of Greek prices.

Any general economic conclusions which it has been possible to arrive at have been offered at the beginnings of the relevant sections.

A word as to form. Italics have been used for the first occurrence of the transliterated Greek names of the items in any given section, but not thereafter except to distinguish the use of such names as terms from their use to denote actual objects.

The present study is necessarily restricted to the items listed in the Attic Stelai. Ideally, each word should be interpreted in a context which includes all related words and objects, so that a complete picture would emerge. But the painting of such a broad picture must be the work of much future investigation. The Attic Stelai have not yet yielded up all their secrets.

I. AGRICULTURAL PRODUCTS

Sir A. Hort in his index to his edition of Theophrastos' *Enquiry into Plants*, Vol. II, Loeb Classical Library, London and New York, 1916, has given correct Latin and English botanical names of plants, which are repeated here for the sake of convenience. These terms have been compared with those of E. Halácsy in "Conspetus florum graecae," *Magyar Botanikai Lapok*, XI, 1912, pp. 115 ff. Halácsy cites the sections of Greece in which the various plants were grown in 1912. One improvement has been made in Hort's list: *kenchros* is 'common millet,' not 'millet.'¹ The chief work on the subject of plants is still V. Hehn, *Kulturpflanzen und Haustierte in ihrem Uebergang aus Asien nach Griechenland und Italien sowie in das uebrige Europa*, 7th edition, Berlin, 1902.² For bibliographical references, including a list of

¹ See N. Jasny, "The Wheats of Classical Antiquity," *Johns Hopkins Univ. Stud. in Hist. and Pol. Sc.*, LXII, 1944, no. 3, p. 12.

² The 8th edition of 1911 was not available to me. Also unavailable was a study in modern Greek by P. Gennadeios, *Λεξικὸν Φυτολογικόν*, Athens, 1914.

articles in Pauly-Wissowa, *R.E.*, see F. M. Heichelheim, *Wirtschaftsgeschichte des Altertums*, II, Leiden, 1938, p. 1102, note 46.

With regard to prices of various agricultural products, figures have been given not only for Athens, Delos, and other parts of Greece when available, but for the Roman republic and empire. These latter figures have been culled in great part from T. Frank's *Economic Survey*, I-V. The author is well aware of Hasebroek's warnings about faulty conclusions in the field of ancient economic history which result from failure to exercise caution in the correlation of evidence from different periods.³ Nevertheless, so few figures are available for most products that we have presented all of them for examination. In fairly steady industries there was little variation in peacetime prices. T. Frank has noted, for example, that prices of wheat and wine were about the same in Diocletian's day as in Varro's,⁴ and he has found the same ratio of prices at Delos and in Rome.⁵

The document which most closely resembles ours is the Edict of Diocletian of A.D. 301, although the latter is in a much better state of preservation. For convenience, references have been made to the text and translation of Miss E. Graser in the appendix to *Economic Survey*, V.⁶ The Edict attempted to set maximum retail prices for the empire; these were not necessarily market prices. Eight years earlier in Egypt an artaba of wheat had been valued at a considerably lower figure than that given in the Edict.⁷ Indeed, Diocletian stated in the Preamble: "We have decreed that there be established, not the prices for articles of sale—for such an act would be unjust when many provinces occasionally rejoice in the good fortune of wished-for low prices and, so to speak, the privilege of prosperity—, but a maximum, so that when the violence of high prices appears anywhere . . . avarice . . . might be checked."

For convenience the following tables of Greek measures are given. These are reproduced from the table of F. Hultsch, *Griechische und roemische Metrologie*, Berlin, 1882.⁸

³ J. Hasebroek, *Trade and Politics in Ancient Greece*, English translation, London, 1933, p. vi.

⁴ *Economic Survey*, I, p. 404.

⁵ *Ibid.*, p. 193.

⁶ To the text of Miss Graser may now be added the following fragments: A. D. Keramopoulos, 'Αρχ. Έφ., 1931, pp. 163-164; M. Guarducci, *Rendiconti della pontificia Accademia di Archeologia*, XVI, 1940, pp. 11-24; I. W. MacPherson, *J.R.S.*, XLII, 1952, pp. 72-75; Bingen, *B.C.H.*, LXXVIII, 1954, p. 349; and G. Caputo and R. Goodchild, *J.R.S.*, XLV, 1955, pp. 106-115. Two additional fragments have recently been discovered in Greece by Mr. E. J. Doyle.

⁷ *Pap. Oxy.* 2142.

⁸ The discovery of standard measures of capacity in the American excavations in the Agora and on the north slope of the Acropolis has demonstrated that the figures of Hultsch are approximately correct; see below, p. 193, note 139.

Greek Liquid Measures

Name	Liter
kotyle	0.2736
chous (12 kotylai)	3.283
metretes (12 choes)	39.390

Greek Dry Measures

Name	Liter
kotyle	0.2736
choenix (4 kotylai)	1.094
medimnos (48 choinikes)	52.53

DESCRIPTION OF AGRICULTURAL PRODUCTS

1. *ἀμυγδάλη* (Stele II, line 140). Almond, *Prunus Amygdalus*. The word is of Syrian origin,⁹ and the Syrian almond was famous in antiquity.¹⁰ The word does not occur in the Epic, and the view is held that the tree was not introduced into Greece until relatively late times.¹¹ The word appears first in Phrynichos Comicus.¹² Theophrastos describes the plant in detail, and by the first century B.C. the fruit had become known in Rome as the *nux graeca*.¹³ Excellent almonds were grown on the islands of Naxos and Cyprus, and they were often eaten while still unripe and having a soft skin.¹⁴

Prices: In the Edict of Diocletian, the maximum price placed on almonds was 6 denarii an Italian pint (*xestes*: 0.547 liter).¹⁵

2. *ἄχυρα* (II, 85). Chaff. The word is joined, as in our list, with *ῥῖα* in Pherekrates, frag. 161.¹⁶ Theophrastos refers to the difference between the husk (*achyron*) of wheat and that of barley.¹⁷ Herodotos states that the Scythians stuffed the skins of horses at royal burials with achyra.¹⁸ For the use of achyra in building walls, see *I.G.*, II², 468, line 68, Aristotle, *H.A.*, 612b, 22 and Vitruvius, II, 1; in

⁹ Boisacq, *Dictionnaire*⁴, p. 56.

¹⁰ Heichelheim, "Roman Syria," *Economic Survey*, IV, p. 138 (with references).

¹¹ See Wagler, *R.E.*, s.v. *Ἀμυγδαλή*. We should note, however, the frequency with which the almond is represented in miniature plastic lekythoi in the late fifth and fourth centuries; see for example, *C.V.A.*, Oxford, I, pl. XL, nos. 14-16, and cf. Beazley, *B.S.A.*, XLI, 1945, p. 14.

¹² Frag. 68 (Kock, *C.A.F.*, I, p. 387).

¹³ Pliny, *H.N.*, XV, 90. Cf. Cato, *De agric.*, VIII, 2; and Macrobius, *Sat.*, III, 18, 8.

¹⁴ Athenaeus, II, 52 b-c.

¹⁵ Col. VI, 52.

¹⁶ Cf. Eustathius, 1445, 42.

¹⁷ *H.P.*, VIII, 4, 1.

¹⁸ IV, 72.

planting with seeds in mud, Theophrastos, *H.P.*, IV, 8, 8. Two of the Old Comedy poets refer to a cheap barley cake mixed with chaff.¹⁹ Although commonly meaning 'chaff,' *achyra* sometimes seems to be used for grain and chaff together.²⁰ Inscriptions preserve references to storehouses for chaff at Delos.²¹

Prices: Achyron was not without value. In the Eleusinian accounts of the year 329/8 B.C. (*I.G.*, II², 1672, lines 196-197), the price of *achyra* and *chnous* together is given as 30 drachmas.²² The quantity is not given. For Egyptian prices, see A. C. Johnson in *Economic Survey*, II, pp. 470-471. The price of *achyron* in the Edict of Diocletian is given as 2 denarii per 4 pounds.²³ There is the general heading 'fodder' and two other entries under it in the Edict.²⁴ In connection with this regulation pertaining to hay and forage in small units of two, four and six pounds, it may be recalled that in the Preamble the purpose of the Edict, Diocletian's concern to check the profiteering by those who supplied the army (and presumably the civil service), is set forth in part with these words (translation of E. Graser): "... sometimes in a single purchase a soldier is deprived of his bonus and salary, and the contribution of the whole world to support the armies falls to the abominable profits of thieves, so that our soldiers seem to offer ... their completed labors to the profiteers ..."

3. *ἐλάα* and *ἐλαία* (II, 84, 89, and 118). Olive, *Olea Europea*. *Elaa* is the old Attic form. Both forms, however, occur on Stele II. The words are used for the fruit, although the same word was used for the olive tree.²⁵ For the cultivating, harvesting, and use of the olive, reference may be made to the lengthy article of A. S. Pease, *R.E.*, s.v. *Oelbaum*.²⁶ The olive was known in Early Helladic times, as is shown by the discovery of pits in excavations. Its cultivation was mentioned by Homer, and oil was exported from Athens in the time of Solon. During the classical age it was widely produced. Olives, along with olive oil, bread, cheese, salt, and wine, were regarded as the necessary provisions of life,²⁷ although there is considerable evidence that the ancients held that they had little nutritive value.²⁸ Olives thrive in a calcareous soil, such as that of Attica, and the Athenian olive was famous everywhere. Using figures given in [Demosthenes], XLII, *Against Phainippos*, Jardé (*Céréales*, p. 187)

¹⁹ Poliochos, frag. 2 (Kock, *C.A.F.*, III, p. 390); Antiphanes, frag. 226 (Kock, *C.A.F.*, II, p. 111).

²⁰ Gow *ad* Theokritos 10, 49. Cf. Ure, *Class. Quar.*, XLIX, 1955, p. 227.

²¹ *I.G.*, XI, 2, 287 A, line 149, etc.

²² *Chnous* is likewise coupled with *achyra* in Aristophanes, frag. 76. It is defined in *Syll.*², II, p. 309, note 138.

²³ XVII, 7.

²⁴ XVII, 6-8.

²⁵ See Buck, *Dictionary*, p. 380.

²⁶ See also Michell, *Ec. of Anc. Greece*, pp. 76-77.

²⁷ Aristophanes, *Ach.*, 550, *Eccl.*, 308; Plato, *Lg.*, VI, 782 b, etc.

²⁸ Athenaeus, II, 56 a; Galen, VI, 579 K; Celsus, II, 18.

has estimated that an olive grove would yield approximately three times the value of a similar area planted in wheat.

Information concerning olive prices was not collected by Pease. In a passage of Plutarch which relates that Sokrates led a complaining friend to places where the common necessities of life were sold and pointed out the cheapness of the latter, it is stated that a choinix of olives cost two chalkoi,²⁹ which is at the rate of two drachmas a medimnos. Some seven hundred years later, the Edict of Diocletian established the price of ripe olives as 4 denarii an Italian pint (*xestes*), of olives in brine at 4 denarii for forty pounds, and of olives from Tarsus at 4 denarii for twenty pounds.³⁰

4. *ἔλαιον* (I, 123, 124). Oil. The most detailed treatment of *elaion* is the 1937 article of A. S. Pease in *R.E.*, s.v. *Oleum*. Oil was used in ancient times for affording light, in food, and in the exercises of the gymnasia.

Prices are given in cols. 2472-2473 of Pease's article. In Book II of the *Oeconomics* ascribed to Aristotle,³¹ the price of a chous of oil at Lampsakos is given as three drachmas (or one and one-half obols a kotyle; 36 drachmas a metretes). In an Athenian inscription of the fourth century, which lists the tariff of fees for sacrifice,³² three kotylai of oil cost one and one-half obols (or one-half obol a kotyle; 12 drachmas a metretes). Prices of oil at Delos are discussed by Larsen,³³ and in Spaventa de Novellis' *I prezzi in Grecia e a Roma nell' antichità*, pp. 51-54, there are listed in tabular form 105 epigraphical references giving prices at Delos from 310 to 169 B.C. At the close of the fourth century, oil brought the astonishingly high price of 55 drachmas a metretes.³⁴ By 250 B.C. the price ranged between 16 and 18 drachmas, and thereafter remained stable. The lowest price, of 11 drachmas, was reached in 190-180 B.C.³⁵ For the Roman period, T. Frank has summarized the evidence concerning olive oil as follows: "In the Catonian period oil sold wholesale at about one and a half sesterces the liter. . . . In Diocletian's day the price of oil had about doubled in the East. Ordinary oil was then about eighteen cents the liter, while the best grade sold at about 30 cents. For Cicero's day it probably would be fair to assume a price of 2-3 sesterces the liter."³⁶ The prices of oil are given in par. III of the Edict. The figures for one Italian pint of oil from unripe olives, second quality oil, and common oil are 40, 24, and 12 denarii respectively.

²⁹ *De tranquillitate animi*, 470 F.

³⁰ Col. VI, 89, 90, 91.

³¹ 1347a, 33.

³² *I.G.*, II², 1356. For the fixed prices in this and other sacred laws, see below, p. 198, note 170.

³³ "Roman Greece," *Economic Survey*, IV, pp. 388-390.

³⁴ The notorious uncertainty of the olive crop might account for violent fluctuations in price in antiquity as in modern times when a good harvest may be followed by a complete and utter failure,—a few days of rainy weather at the critical time of blossom may bring disaster.

³⁵ *Insc. Délos*, 440, line 22.

³⁶ *Economic Survey*, I, p. 404. Cf. also pp. 192-193 and 284.

5. *ῥια* (II, 85). Husks, chaff. Eratosthenes, according to Eustathius, defined the word as the stalks or straw of pulse (*ὀσπρίων καλάμαι*).³⁷ This definition is made with reference to *Od.*, V, 368, where the rousing of the waves by Poseidon is compared to a great wind tossing a heap of parched *eia*. For several conjectural etymologies, see Boisacq, *Dictionnaire*⁴, p. 316.

Prices. No figures are preserved for *eia*. For the price of hay and vetch fodder, see above, under *ἄχυρα*.

6. *κορίαννον* (II, 141). Coriander, *Coriandrum sativum*. References to *koriannon* are chiefly in connection with cooking. Alkaios Comicus refers to powdered coriander-seed used as seasoning with game,³⁸ and Anaxandrides includes koriannon in a recipe for smoked fish.³⁹ The word occurs twice in the *Equites* of Aristophanes in connection with a garnish for fish,⁴⁰ and B. B. Rogers notes that coriander leaves, not seeds, are meant; he compares its use as a culinary herb for salads in England.⁴¹ The coriander of Egypt was considered the best, and leases are preserved from Oxyrhynchus which mention its planting.⁴²

7. *κριθή* (II, 94-95, 237; V, 17, 18, 21).⁴³ Barley, *Hordeum sativum*. In classical antiquity, when maize was unknown and millet did not survive the Mediterranean winter, barley was the only strong competitor with wheat for consumption. Barley could command an advantage over spring wheat because of its shorter growing season in a climate with a summer drought.⁴⁴ Jasny believes that in Greece and in most islands of the eastern Mediterranean, wheat was definitely second to barley. For Attica this seems proved by an inscription which gives the amounts of the first-fruits sent to Eleusis in 329 B.C. by each of the phylai and outlying districts as well as colonies.⁴⁵ The Attic crop reached a total of 363,400 medimnoi of barley and only 39,112 of wheat.⁴⁶ In addition, the island of Salamis produced 24,525 medimnoi of barley. There was then about ten times more barley being raised than wheat, as was to be expected in a country of poor soil, although the public taste greatly preferred wheat.⁴⁷

³⁷ Eust., *ad Od.*, V, 368 (1445, 42). Cf. Photius, 64.4; and above, *s.v.* *ἄχυρα*.

³⁸ Frag. 17 (Kock, *C.A.F.*, I, p. 759).

³⁹ Frag. 50 (Kock, *C.A.F.*, II, p. 157).

⁴⁰ *Eq.*, 676, 682. Aristophanes refers to an obol's worth, but the quantity of the spice is not given.

⁴¹ *Ad Eq.*, 676.

⁴² See A. C. Johnson, "Roman Egypt," *Economic Survey*, II, p. 3.

⁴³ The root meaning of the word is uncertain; see Buck, *Dictionary*, p. 516.

⁴⁴ N. Jasny, *op. cit.*, p. 71.

⁴⁵ *I.G.*, II², 1672. Somewhat lower figures are given by Jardé, *Céréales*, pp. 36 ff., 94 ff.

⁴⁶ The figures are taken from the calculations of Heichelheim, *R.E.*, Suppl. VI, 1935, *s.v.* *Sitos*, 846. 329 B.C. is regarded by most historians as a year of severe shortage; A. W. Gomme (*Population of Athens in the Fifth and Fourth Centuries B.C.*, Oxford, 1933, p. 30) dissents.

⁴⁷ For the Athenian dislike of barley, see the references collected by Amyx in *A.J.A.*, XLIX,

For a general discussion of *krithe*, see Orth, *R.E.*, s.v. *Gerste*.⁴⁸ Athenaeus devotes a lengthy section in Book III (109 b ff.) of the *Deipnosophistai* to a description of many kinds of bread, including that made with barley. Lesbian barley was the best for this purpose (112 a), but Athenian bread was varied and choice (112 c). Barley bread or cake was called *maza*, and *alphita* usually denoted barley groats.⁴⁹

Evidence for the prices of barley is collected by Jardé, *Céréales*, pp. 180-183; Heichelheim, *Wirtschaftliche Schwankungen*, Jena, 1930, pp. 51-52; Spaventa de Novellis, *I prezzi in Grecia e a Roma nell' antichità*, p. 50; and Larsen, *Economic Survey*, IV, pp. 384-385.⁵⁰ Barley frequently sold for half the price of wheat, although Larsen has warned that this observation must not be made into a hard and fast rule.⁵¹ Ca. 330 B.C. the price of barley was five drachmas a medimnos.⁵² According to the [Demosthenes] speech *Against Phainippos* of the same period, the price of barley must have been six drachmas, for eighteen drachmas are said to have been three times the former price;⁵³ but in 329/28 B.C., in the accounts of the epistatai of Eleusis, barley is priced at three drachmas a medimnos.⁵⁴ For Delos, the statistics are presented by Heichelheim⁵⁵ and by Larsen.⁵⁶ The lowest price known was two drachmas; the most common price was four. In the Edict of Diocletian, the price for the sale of barley which no one might exceed was 60 denarii for one castrensis modius,⁵⁷ which was at the rate of 180 denarii a medimnos. For prices at Rome, see Frank, *Economic Survey*, I, pp. 48-49, 98, 192.

8. *μελίνη* (II, 139). Italian millet, *Setaria italica*. We know from Demosthenes that Italian millet was one of the principal crops of Thrace,⁵⁸ and from Xenophon that it was grown in Cilicia⁵⁹ and in that part of the Black Sea which is termed 'Thrace-in-Asia' (Bithynia).⁶⁰ Generally yielding only a small return, millet could

1945, p. 516. The relative positions of the two grains is perhaps most succinctly illustrated by the practice in the Prytaneion: barley loaf on normal days supplemented by a wheaten loaf on festivals; see Solon's ordinance quoted by Athenaeus (IV, 137 e).

⁴⁸ For a classification of *krithe* as husked and naked grain, see Moritz, *Class. Quar.*, XLIX, 1955, pp. 130-134.

⁴⁹ See Orth, *R.E.*, s.v. *Gerste*, 1281.

⁵⁰ See also below, p. 199.

⁵¹ *Op. cit.*, p. 385. In the time of Cicero (*Verr.*, III, 188), barley was reckoned at one-half the price of wheat.

⁵² *I.G.*, II², 408, lines 13-14. *κριθαί* is a restoration, but it appears certain.

⁵³ XLII, 20 and 31.

⁵⁴ *I.G.*, II², 1672, line 283.

⁵⁵ *Wirtschaftliche Schwankungen*, Table XIV, pp. 128 ff.

⁵⁶ *Op. cit.*, pp. 384-386.

⁵⁷ Col. I, 2.

⁵⁸ VIII, *On the Chersonesos*, 45; and X, *Against Philip*, IV, 16. Xenophon (*Anab.*, VI, 5, 12) refers to a tribe in Thrace as the 'Millet-eaters.'

⁵⁹ *Anab.*, I, 2, 22.

⁶⁰ *Anab.*, VI, 4, 6.

not compete with grains which were hardy enough to withstand the winter, and it never attained more than the position of a secondary crop.⁶¹ For ancient references, see Orth, *R.E.*, s.v. *Hirse*.

Prices. The maximum price of *meline* in the Edict of Diocletian was fixed at 50 denarii for one castrensis modius (150 denarii a medimnos).⁶²

9. *oĩvos* (I, 114, 117-121; VI, 60-61, 64-65). Wine. Viticulture in antiquity is discussed in an excellent article by Jardé in Daremberg-Saglio, *Dictionnaire*, s.v. *Vinum*.⁶³ In addition to the casual remarks of Theophrastos in his two treatises, we know the names of many authors who published special works on viticulture.⁶⁴ Most instructive are the preserved leases of vineyards which enumerate various terms which the lessor had to carry out.⁶⁵ In Book I of the *Deipnosophistai*, Athenaeus has given a lengthy catalogue of different vintages of wine: ⁶⁶ the pleasantest of the Greek wines was the Chian; ⁶⁷ among the poorest the Corinthian, which Alexis had termed 'torture.' ⁶⁸ Athenaeus speaks of some wine as sixteen years old,⁶⁹ and gives the usual dilution as half and half.⁷⁰ Although wine was one of the most important products of Attica, many better sorts were imported from various places abroad.⁷¹

For the prices of *oinos*, see below, pp. 199-203.

10. *ōξος* (I, 113, 115, 116, 122; II, 117).⁷² Vinegar. The word *oxos* was used by the ancients for vinegar and for a sour wine of inferior quality.⁷³ Various types of

⁶¹ See N. Jasny, *op. cit.*, p. 16.

⁶² Col. I, 6.

⁶³ Cf. also his article *Vinitor*.

⁶⁴ See E. Oder in F. Susemihl, *Geschichte der griechischen Litteratur in Alexandrinazeit*, I, Leipzig, 1891, pp. 839 ff. For Roman treatises on viticulture, see R. Billiard, *La vigne dans l'antiquité*, Lyon, 1913, pp. 156 ff.

⁶⁵ *Syll.*³, 963 and *I.G.*, II², 2492. M. Rostovtzeff (*Soc. and Ec. Hist. of Hell. World*, II, p. 1188) observes that these leases have not been studied in connection with ancient agronomists for the information they contain concerning viticulture. Mention might also be made of the interesting Thasian laws, directed against speculation in wine, published by G. Daux in *B.C.H.*, L, 1926, pp. 214 ff.

⁶⁶ 25 f ff.

⁶⁷ I, 32 f.

⁶⁸ I, 30 f.

⁶⁹ XII, 584 b.

⁷⁰ X, 426 b.

⁷¹ Chios, Thasos, Pramnós, etc. See the references in Ehrenberg, *People of Aristophanes*², p. 136, note 5. Imported wine jars of the second half of the fifth century, found in Athens, include (e. g.) amphoras from Chios (*Hesperia*, III, 1934, fig. 1, no. 1; XXII, 1953, p. 104, nos. 150-152 and pl. 39); from Mende (*Hesperia*, IV, 1935, p. 496, fig. 17, no. 88; XXII, 1953, p. 106, no. 161 and p. 103, fig. 5); and from Thasos (*A.J.A.*, L, 1946, p. 34, fig. 3, no. 3).

⁷² For the etymology of the word, see Buck, *Dictionary*, p. 383.

⁷³ See Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Acetum*; and Stadler, *R.E.*, s.v. *Essig*. The comic poet Alexis (frag. 285: Kock, *C.A.F.*, II, p. 400) humorously referred to the notoriously sour Deceleian wine as *oxos*.

vinegar, which was regarded by Attic writers as a condiment *par excellence*,⁷⁴ are described by Athenaeus, II, 67 c ff. The best varieties were reported to be Knidian and Egyptian. The oldest preserved recipe is found in Cato, *De agricultura*, 104. Vinegar was usually extracted from the cheaper sorts of wine, but there are references which show that the ancients also made it from dates, figs, etc.⁷⁵

This writer has found prices for oxos only in papyrological sources and in the Edict of Diocletian. *Pap. Gen.*, 71 (Fayum, second century after Christ) comprises a list of the sales of oxos.⁷⁶ The price varies between 4 drachmas and 5½ drachmas a dichoron.⁷⁷ A few other prices are given by A. C. Johnson, "Roman Egypt," *Economic Survey*, II, pp. 314-315. In A.D. 301 the maximum price for vinegar was established in the Edict of Diocletian at 6 denarii an Italian pint (*xestes*).⁷⁸

11. *ὄροβος* (II, 91). Bitter vetch. *Ervum Ervilia*.⁷⁹ The *orobos* was one of the vetches of which, according to Athenaeus,⁸⁰ several varieties were eaten both green and dry.⁸¹ When dry, they were served either boiled or roasted like chestnuts.⁸² In a fragment of Alexis the *orobos* seems to be regarded as belonging to a pauper's diet.⁸³ This is the purport, too, of a passage in Philostratos, which tells of finding *oroboi* on sale in the market only when the rich men had shut up all the grain.⁸⁴ The point of the answer to Plutarch's 46th Greek Question, "Why is it that the people of Tralles call *orobos* 'purifier' and make particular use of it for ritual cleansings and purifications?", is that *orobos* was lacking in value as a food.⁸⁵ Finally, the same may be inferred from a passage in Demosthenes.⁸⁶ He says about a time of great scarcity in the last war with Sparta, "You know that *oroboi* were sold for food."

Pliny refers to a flour of bitter vetch used as leavening in barley bread.⁸⁷ Athenaeus cites Phainias of Eresos in his work *On Plants* as referring to the use of *orobos* as fodder for plough-cattle.⁸⁸

⁷⁴ Athenaeus, II, 67 c.

⁷⁵ Xenophon, *Anab.*, II, 3, 14; Pliny, *H.N.*, XIV, 103; Columella, XII, 5 and 17; *Geoponika*, VIII, 33.

⁷⁶ J. Nicole, *Les papyrus de Genève*, Geneva, 1896.

⁷⁷ A dichoron equals eight choes.

⁷⁸ Col. III, 5.

⁷⁹ See Fournier in Daremberg-Saglio, *Dictionnaire, s.v. Cibaria*, 1144 b; V. Hehn, *Kulturpflanzen und Haustiere*, 7th edition, Berlin, 1902, pp. 213 ff.; and Olck, *R.E.*, s.v. *Erbse*.

⁸⁰ II, 54 f.

⁸¹ Theophrastos (*H.P.*, II, 4, 2) states that only vetches sown in spring are digestible.

⁸² Cf. Aristophanes, *Pax*, 1136.

⁸³ Kock, *C.A.F.*, II, 447.

⁸⁴ *Vit. Apoll.*, I, 15.

⁸⁵ See W. R. Halliday, *Greek Questions of Plutarch*, Oxford, 1928, pp. 189-190.

⁸⁶ XXIII, *Against Aristokrates*, 115.

⁸⁷ *H.N.*, XVIII, 104.

⁸⁸ IX, 406 c. Cf. Aristotle, *H.A.*, III, 522 b, 28; VIII, 595 b, 5.

For the prices of orobos, see below, p. 199.

12. *πυρός* (I, 126-139; II, 93). *Pyros* is a generic term,⁸⁹ which included both hulled and naked types of wheat.⁹⁰ N. Jasny, in his 1944 monograph on "The Wheats of Classical Antiquity,"⁹¹ has made a strong case for the theory that the wheat grown in Greece was of the emmer group, including both hulled and naked types, almost to the exclusion of other groups. By far the most common subspecies has been identified as *durum*.⁹² From his study of the Mediterranean climate and soil, Jasny concluded that production of wheat was not likely to have been large in the south-eastern part of Greece, including Attica. Wheat production became increasingly greater northward and westward from Attica.⁹³

For prices of *pyros*, see below, pp. 196-198.

13. *σήσαμον* (II, 136). Sesame, *Sesamum indicum*. Evidence for the extent of the cultivation of sesame, from India to the Mediterranean, is collected by Steier in *R.E., s.v. Sesamon*. In Syria sesame-seed was more expensive than wheat-seed,⁹⁴ for sesame oil was there regarded as a substitute for olive oil. Babylonia, which in places could not produce the olive, used sesame oil, and prices of it in the third century B.C. are given by B. Meissner.⁹⁵

In Greece, where Steier states that sesame is today grown in Thera and Attica, its cultivation in antiquity must have been common; for Theophrastos frequently uses the sesame for comparison with unfamiliar plants.⁹⁶ Sesame was a summer crop and did well with irrigation.⁹⁷ It was used for medical purposes and as an ingredient of perfumes and drugs.⁹⁸ References to sesame bread and sesame cake are numerous. The latter was frequently referred to by Aristophanes as a favorite dainty, and was the recognized wedding cake at Athens.⁹⁹ Athenaeus lists sesame-seeds among des-

⁸⁹ Galen, *De alimentorum facultatibus*, I, 6, 1. For derivation of the term, see Buck, *Dictionary*, p. 515.

⁹⁰ Naked grain is that in which the kernels fall out of their hulls in threshing. In hulled grain the kernels remain enclosed in threshing.

⁹¹ See above, note 1.

⁹² J. and Ch. Cotte, *Étude sur les blés de l'antiquité classique*, Paris, 1913, p. 93; and N. Jasny, *Amer. Hist. Rev.*, XLVII, 1942, p. 762.

⁹³ "Wheats," p. 117. For the major sources of Athenian grain in the fifth century, see L. Casson, *T.A.P.A.*, LXXXV, 1954, p. 168.

⁹⁴ *Bab. Baba Megia*, 21a, 104b. Cf. Heichelheim, "Roman Syria," *Economic Survey*, IV, p. 132.

⁹⁵ "Warenpreise in Babylonien," *Abh. der pr. Akad. der Wissenschaften*, No. 1, Berlin, 1936, p. 9.

⁹⁶ *H.P.*, III, 16, 6; III, 18, 13; IV, 8, 14; VI, 5, 3; etc.

⁹⁷ *Ibid.*, VII, 7, 3.

⁹⁸ Theophrastos, *De odoribus*, 20; *H.P.*, IX, 11, 9; and Pliny, *H.N.*, XIII, 11; XXIII, 95; etc.

⁹⁹ *Pax*, 689; *Thesm.*, 570; *Ach.*, 1092.

serts.¹⁰⁰ Among the professions of freedmen, we have the record of a man and a woman who were sesame-sellers at Athens in the fourth century B.C.¹⁰¹

The maximum price of sesame in the Edict of Diocletian was 200 denarii for one *castrensis modius*, which was double the price fixed for wheat.¹⁰²

14. *σταφυλή* (II, 83, 88). Grapes, a bunch of grapes.¹⁰³ Quotations with reference to several types of grape are given by Athenaeus, XIV, 653 b-654 a. The form *staphyle* Athenaeus regarded as Asiatic. It designates the ripe, fresh grape in contrast with *ὄμφαξ*, the unripe grape, and *σταφίς*, the raisin. Cf. *Anth. Pal.*, V, 304 (Paton's translation): "When you were a green blade (*omphax*) you refused me; when you were ripe (*staphyle*) you bade me be off, at least grudge me not a little of your raisin (*staphis*)."

The grapes referred to in Stele II were sold on the vine. Pliny the Younger once casually mentions having sold his hanging crop,¹⁰⁴ and his uncle in giving the price that was paid for a crop notes that the grapes were sold on the vine.¹⁰⁵

Prices. In the Diocletian Edict, the price of table grapes is given as 4 denarii for 4 pounds,¹⁰⁶ which T. Frank states was equivalent to two pounds for one cent in terms of the 1932 gold dollar.¹⁰⁷

15. *σῦκον* (II, 83, 88, 134).¹⁰⁸ Fig (fruit), *Ficus Carica*.¹⁰⁹ We know from Theophrastus that the ancients discovered a very scientific remedy in the process called 'caprification' (cross-fertilization of the cultivated fig with the wild by means of the wasp) to prevent the dropping of the immature fruit.¹¹⁰ Athenaeus devotes a lengthy section of Book III of the *Deipnosophistai* to the fig.¹¹¹ It seems to have grown everywhere, and Attic figs, which were among the best,¹¹² were exported as far as Babylon.¹¹³ Because of the sugar content, figs made a highly sustaining army ration.¹¹⁴ Dried figs

¹⁰⁰ XIV, 640 d: Greek *tragemata*, 'things to chew,' i. e., nuts and dried fruits.

¹⁰¹ *I.G.*, II², 1554, line 40; and 1561, line 23.

¹⁰² Col. I, 26.

¹⁰³ For the collective meaning and the etymology of *staphyle*, see Buck, *Dictionary*, p. 378.

¹⁰⁴ *Ep.*, VIII, 2, 1.

¹⁰⁵ *H.N.*, XIV, 50. Cf. Frank, *Economic Survey*, V, p. 150, note 17.

¹⁰⁶ Col. VI, 80.

¹⁰⁷ *Economic Survey*, I, p. 404.

¹⁰⁸ For the derivation of the word, see Buck, *Dictionary*, pp. 377-378.

¹⁰⁹ See Olck, *R.E.*, s.v. *Feige*; V. Hehn, *Kulturpflanzen*⁷, pp. 94-102; and Michell, *Ec. of Anc. Greece*, pp. 77-78, 284.

¹¹⁰ *H.P.*, II, 8, 1. For the history of caprification, which is today practised extensively, see Olck, *op. cit.*, 2100-2103.

¹¹¹ 74 c-80 e. Pliny, *H.N.*, XV, 68-83, enumerates twenty-nine kinds.

¹¹² Athenaeus, III, 74 d-e.

¹¹³ Plutarch, *Regum et imperatorum apophthegmata*, 173 C.

¹¹⁴ Polybios, XVI, 24, 5 and 9.

(ἰσχαδες) were a cheap food for the poor,¹¹⁵ and choice ones appeared on the tables of the well-to-do.¹¹⁶

Prices.¹¹⁷ Teles in Stobaeus I, 98 (Hense) tells the anecdote, similar to the one told of Sokrates in Plutarch,¹¹⁸ that Diogenes pointed out to a complaining friend the cheapness of common necessities in Athens, including dried figs which were priced at two chalkoi a choinix, or two drachmas a medimnos. The period of Diogenes is toward the end of the third century B.C. On the authority of Varro, Pliny gives the price of 30 pounds of dried figs in Rome in 150 B.C. as one *as*.¹¹⁹ About the same time, Polybios gives the price of figs for lower Lusitania in Spain as a talent's weight for three obols,¹²⁰ but T. Frank has explained that this and other quoted prices seem so preposterously low because the area was excluded from the markets for heavy goods.¹²¹ All of these prices, it should be emphasized, are for dried figs. In the Edict of Diocletian of A.D. 300, however, prices for figs of different types are given.¹²² The maximum price for the best quality was 4 denarii for 25 pounds, and common figs were 4 denarii for 40 pounds. T. Frank has estimated this last figure as equal to 1.7 cents in terms of the gold dollar of 1932.¹²³

16. φακός (I, 125; II, 92). Lentil, *Ervum Lens*.¹²⁴ Lentils, as other legumes, were grown for food, fodder, and for the purpose of fertilizing the fields.¹²⁵ Athenaeus devotes several chapters to the humble lentil soup and gives many recipes.¹²⁶

For the price of lentils, see below, p. 199.

17. χέρχρος (κέγχρος) (II, 138). Common millet,¹²⁷ *Panicum miliaceum*. In comparing *kenchros* with *melinos*, Theophrastos states that the former is the more robust plant, the latter is sweeter.¹²⁸ We know from Xenophon that *kenchros* was grown in Cilicia.¹²⁹ Pliny states that there is no food which the Pontic people prefer to

¹¹⁵ Columella, XII, 14.

¹¹⁶ For the Attic dried figs, which were very much esteemed, see Athenaeus, XIV, 652b-653b. Cf. also Suetonius, *Aug.*, 76, 1.

¹¹⁷ See Olck, *op. cit.*, 2134-2135.

¹¹⁸ *De tranquillitate animi*, 470 F.

¹¹⁹ *H.N.*, XVIII, 17.

¹²⁰ Polybios, XXXIV, 8, 9.

¹²¹ *Economic Survey*, I, p. 196. Cf. Van Nostrand, "Roman Spain," *ibid.*, III, pp. 140-141.

¹²² Col. VI, 78, 79, 84, 85, 88.

¹²³ *Economic Survey*, I, p. 404.

¹²⁴ See Hehn, *Kulturpflanzen*⁷, pp. 212, 218-219; Fournier, Daremberg-Saglio, *Dictionnaire*, s.v. *Cibaria*, 1144 b.

¹²⁵ Columella, II, 10, 15-16; Pliny, *H.N.*, XVIII, 123.

¹²⁶ IV, 156 d-159 f.

¹²⁷ See N. Jasny, "Wheats," p. 12.

¹²⁸ *H.P.*, VIII, 7, 3.

¹²⁹ *Anab.*, I, 2, 22.

Italian millet,¹³⁰ but Galen comments on the superiority of kenchros.¹³¹ Athenaeus quotes a fragment from Anaxandrides (41, line 23: Kock, *C.A.F.*, II, p. 151) in which a pot of millet is listed as part of a dower which was contributed for a brilliant banquet.¹³² For a beer made from kenchros, see Athenaeus, X, 447 d.

The maximum price of uncrushed kenchros in the Edict of Diocletian was 50 denarii for one castrensis modius; 100 denarii for crushed millet.¹³³

MEASURES

Plutarch (*Mor.* 416 B) observed that "often the measures and the things measured are called by the same name, as, for example, the kotyle, choinix, amphoreus and medimnos." That there were standards for dry and liquid measures of capacity in the time of our inscriptions appears clearly from Andokides, *De Mys.*, 83, Plato, *Lg.*, 746 D-E, and, more particularly, Aristotle, *Ath. Pol.*, 10. Aristotle compared the measures of his own day, which he believed to be the same as those of Solon, with the pre-Solonian measures, which he believed to be Pheidonian. In this part of the study of the Attic Stelai, we shall be concerned with the words only as they are used in the sense of measures. The same words, where they are used of containers, will be discussed by Mr. Amyx in Part III of this study.

The entire study of metrology is now very much in a state of flux. This results from the probability, first, that individual city-states may have changed their official measures throughout the course of antiquity; and, secondly, that capacities were not necessarily uniform from one city-state to another. The situation may be much like that with regard to the Greek festival calendars. It is quite obvious that there is pressing need for study in this area, study which should be based on the archaeological evidence; and the present writer can only regard his conclusions as very tentative.

In our lists, the dry measures, according to which grains, figs, and almonds were sold, are as follows:

<i>Measure</i>	<i>Product</i> ¹³⁴
ἡμισάκιον ¹³⁵	Italian millet, sesame, common millet
μέδιμνος	Barley
φιδακνίς	Barley
φορμός	Almonds, coriander, barley, bitter vetch, wheat, figs, lentils

¹³⁰ *H.N.*, XVIII, 101.

¹³¹ *De alim. fac.*, I, 15, 3.

¹³² IV, 131 c.

¹³³ Col. I, 4 and 5.

¹³⁴ Listed in the order of the discussion above.

¹³⁵ Also noted by Pollux (X, 169) as found in the *Demioqrata*.

In addition, we know from Pollux that three ἡμιφόρμια of salt were sold in the *Demioprata*.¹³⁶

The liquid measures are:

<i>Measure</i>	<i>Product</i>
χοῦς	Wine
ἀμφορεὺς	Wine, vinegar
στάμνος	Oil, olives, wine, vinegar

DRY MEASURES

ἡμισάκιον. There is insufficient evidence to determine the size of this measure, if indeed it represented a fixed capacity. The word has hitherto been known only from the reference in Pollux to the *Demioprata*. Pollux quotes an entry which may have been copied from our Stele II, lines 136-137. Liddell-Scott-Jones gives no example of σακίον as a measure and but one of σάκκος, in a papyrus dated in A.D. 185.¹³⁷

μέδιμνος. F. Hultsch has estimated the capacity of this dry measure in Athenian standards as 52.53 liters,¹³⁸ which would make it approximately 1½ bushels by United States standards.¹³⁹ The U. S. Government, for customs purposes, assumes that 60 pounds of wheat or 48 pounds of barley comprise the equivalent of a bushel measure. An Attic medimnos of wheat, then, would weigh 90 pounds; a medimnos of barley, 72 pounds.¹⁴⁰

φιδακνίς. The Attic form is for πιθακνίς of other dialects. The word has hitherto appeared only in Pollux, who knew it from the *Demioprata*,¹⁴¹ although the diminutive form *pithaknion* is more common. *Phidaknis* occurs only once in our Stelai and then in connection with barley.¹⁴² The alternative form *phidakne* (*pithakne*) is best known from the picturesque language of the *Equites* of Aristophanes where the poet refers to the influx of the country-folk into Athens, which was too small to contain them,

¹³⁶ X, 169.

¹³⁷ U. Wilcken, *Griechische Ostraka aus Aegypten und Nubien*, Leipzig and Berlin, 1899, no. 1096.

¹³⁸ *Op. cit.*, p. 703.

¹³⁹ American excavations on the north slope of the Acropolis and in the Agora have brought to light Athenian containers which had been used as official measures. Preliminary reports concerning their capacities have clearly indicated that the older conclusions of Hultsch on Athenian metrology are approximately correct. See, in particular, O. Broneer, *Hesperia*, VII, 1938, p. 223; S. Young, *Hesperia*, VIII, 1939, p. 280; M. Crosby, *Hesperia*, XVIII, 1949, p. 111; and H. A. Thompson, *Hesperia*, XXIV, 1955, pp. 69-70. The estimates of Viedebantt, which had come to be regarded as standard, are too low.

¹⁴⁰ The ancients used measures, not weights, and this fact has misled some writers, including Glotz, in their calculations; see N. Jasny, *Amer. Hist. Rev.*, XLVII, 1941-42, p. 752, note 11; and *Johns Hopkins Univ. Stud. in Hist. and Pol. Sc.*, LXII, 1944, p. 80, note 34.

¹⁴¹ X, 74; cf. Pollux, X, 131.

¹⁴² V, 21.

and to their dwelling in phidaknai.¹⁴³ Hesychius and Suidas define them as small pithoi. Athenaeus states that at symposia and the public mess the wine is mingled in pithaknai.¹⁴⁴ Ion of Chios spoke of ladling wine with jugs (*olpai*) from sacred pithaknai.¹⁴⁵ Liddell-Scott-Jones cites several examples in which the jar was used for storing figs, etc. These references give a general idea of the size of the cask; its exact capacity cannot be determined.

φορμός. The *phormos* was much the most common dry measure used in our Stelai. Unfortunately, it is a measure about which very little is known. C. D. Adams in his commentary on Lysias has written, "The word means a basket; but as to how much the standard grain basket held we have no knowledge whatever."¹⁴⁶ The word is not discussed in Viedebant's standard work on the subject of measures,¹⁴⁷ nor in Tan-nery's article *Mensura* in Daremberg-Saglio, *Dictionnaire*; nor does it appear in the index to Hultsch's *Metrologicorum scriptorum reliquiae* (2 vols., Leipzig, 1864 and 1866). But that it was an official measure referred to in a *nomos* is clear from Lysias, XXII, 5.¹⁴⁸ In the speech *Against the Grain Dealers*, it is stated that the provision of the law was that no retailer, under penalty of death, should buy more than fifty *phormoi* at a time. The oration was probably delivered in 386 B.C., at a time when the Spartans had dislodged the Athenians from Aegina and were able to menace the grain ships approaching the Peiraeus. Böckh suggested that the *phormos* was a 'back-load,' similar to the *cumera* of the Italians, and that it could not have differed much from the *medimnos*¹⁴⁹ which, being more than 52 liters, would probably have held about 90 pounds in weight.¹⁵⁰ There is a passage further on in the same oration (XXII, 12) which states that the dealers sometimes sold grain "at a profit of a drachma just as though they were buying a *medimnos* at a time." Shuckburgh states that the profit of a drachma was per *phormos*,¹⁵¹ and if so, it is a not unreasonable inference that the *phormos* and *medimnos* were identical. To judge from the prices of wheat in our Stelai, we can say that there is no other Attic dry measure with which

¹⁴³ Line 792.

¹⁴⁴ XI, 483 d.

¹⁴⁵ A. Nauck, *T.G.F.*², 734.

¹⁴⁶ *Lysias, Selected Speeches*, New York, 1905, p. 222. Cf. Gernet and Bizos, *Lysias*, II, Paris, 1926, p. 82.

¹⁴⁷ "Forschungen zur Metrologie des Altertums" in *Abh. der königl. sächs. Gesellschaft der Wissenschaft.*, Phil.-hist. Kl., XXXIV, no. 3, Leipzig, 1917.

¹⁴⁸ In Aristophanes, *Thesm.*, 813, there is reference to the wife who has stolen a *phormos* of wheat from her husband. For an interpretation of the passage, see B. B. Rogers, *ad loc.*

¹⁴⁹ A. Böckh, *Staatshaushaltung der Athener*³, I, p. 104. Cf. F. Hultsch, *Metrologie*², pp. 106-107.

¹⁵⁰ The standard U. S. bushel (35.2383 liters) holds 77.6274 pounds of distilled water at 39° Fahr. The U. S. Government for customs purposes has established the equivalent of a bushel of wheat as 60 pounds.

¹⁵¹ *Lysiae Orationes*, XVI, London, 1882, p. 318.

the phormos can reasonably be connected. We have, therefore, followed Böckh in regarding the phormos as equivalent to the medimnos.¹⁵² We should not fail to add, however, that whereas vetch, lentils, and wheat were sold by the phormos in II, 91-93, barley was sold by the medimnos in the following entry.

LIQUID MEASURES

χοῦς. For the secure identification of the *chous*, when used as a measure, as equivalent to 3.283 liters in the metric system, see O. Broneer, *Hesperia*, VII, 1938, pp. 222-224; S. Young, *Hesperia*, VIII, 1939, pp. 274-284; and M. Lang, *B.C.H.*, LXXVI, 1952, pp. 24-25.

ἀμφορεύς. A discussion of the word in the sense of a container is made by Professor Amyx. In this study, the *amphoreus* has been given the equivalent of a metretes, or twelve choes. This is in accordance with the conclusion, for example, of Hultsch (*op. cit.*, p. 101) on the basis of literary evidence. Moreover, Miss Lang has conveniently summarized the measurements of 36 amphoras listed in Brauchitsch's *Die panathenaischen Preisamphoren* as follows: ". . . the Panathenaic amphoras of the earliest fifth century <held> . . . twelve times the early fifth century *chous* and have dimensions which are simple multiples of the *chous*."¹⁵³ Unfortunately the literary evidence cited by Hultsch condenses down to one decisive passage from the fifth-century comic poet Philyllios (Frag. 7: Kock, *C.A.F.*, I, p. 783), which was quoted by Pollux:¹⁵⁴

σοὶ μὲν οὖν τήνδ', ἀμφορεῦ,
δίδωμι τιμήν, πρῶτα μὲν τοῦτ' αὐτ' ἔχειν
ὄνομα μετρητὴν μετριότητος εἵνεκα.

But Wernicke has protested that this is only a joke,¹⁵⁵ and was misinterpreted by Pollux (X, 70). The speaker is making a pun about the moderate size of the wine jar placed before him. The point is well taken, and when Hultsch in 1894 returned to a treatment of the amphora as a measure, he did not repeat his earlier determination.¹⁵⁶ More recently Miss Lang has written, on the basis of unpublished measurements, that "the ordinary amphora of Greek as well as Roman times is more likely to hold eight choes" (*Hesperia*, XXV, 1956, p. 3). Although the archaeological evidence is not

¹⁵² Similarly, it may be noted that the *kados*, 'jar,' was equivalent to the *amphoreus*, 'a liquid measure,' according to Pollux, X, 71.

¹⁵³ *B.C.H.*, LXXVI, 1952, p. 26, note 1.

¹⁵⁴ The value of Moeris' note (p. 45: Pierson), which is not mentioned by Hultsch, seems to me problematical: ἀμφορεὺς Ἀττικοί, μετρητὴς Ἑλληνες.

¹⁵⁵ *R.E.*, s.v. *Amphora* 1, col. 1970.

¹⁵⁶ *R.E.*, s.v. *Amphora* 2. As an Attic measure in the Roman period, Hultsch now identified the amphora as two-thirds of a metretes and referred for this identification to an article s.v. *Quadrantal*. With the passage of some sixty-four years, the *R.E.* unfortunately has not yet embraced the letter Q.

decisive, the present writer has with some hesitation accepted the figure of 12 choes because the first of Miss Lang's two groups, the Panathenaic amphoras of the early fifth century (see note 153), is presumably closer in date to our inscription.

στάμνος. *Stamnos* has not been grouped with dry measures although our Stelai refer to stamnoi of olives (II, line 118), as well as those of oil, wine, and vinegar. It seems preferable to assume in the absence of any evidence of stamnos as a dry measure that the olives were in brine or in oil; hence not 'dry.'

Stamnos is used as a measure of oil in a Greek inscription from Stratoniceia in the time of Iovian.¹⁵⁷ The price of the oil is given as 10,000 denarii per stamnos "because of the continuous unfruitfulness of the olive crop."¹⁵⁸ Moeris, the second-century grammarian, has equated the stamnos with the amphora,¹⁵⁹ which would give it a capacity of 10.3 U. S. gallons (8.5 British, or imperial, gallons). In Pollux X, 72, the stamnos is mentioned in connection with wine containers.

Recently the French have found in Thasos a *sekoma* of which the two cavities are labelled ΞΤΑΜΝΟΞ and ΗΜΙΑΜΦΟΡΙΝ.¹⁶⁰ On the side of the *sekoma* is a dedication by an agoranomos and the word ΟΙΝΗΡΑ (i. e. μέτρα), 'wine-measures.' There can be no doubt, then, that in Thasos about the first century B.C., which seems to be the date required by the letter-forms, the stamnos is a liquid measure. Professor Georges Daux has kindly informed me that the capacity of this Thasian stamnos is 7.68 liters, or one-half the capacity of the Thasian 'half-amphora.' It was exactly equivalent, then, to a quarter of an amphora. This evidence, it is possibly needless to add, does not prove that the stamnos was a uniform unit of measure in Athens of the fifth century; it does prove that the word was so used at times in the Greek world.

PRICES

WHEAT

Prices paid for wheat were as follows:

<i>Sales Price</i>	<i>Item</i>	<i>Reference</i>
[Π]ΗΙΙ	πυρὸν φορμός	I, 137
[Π]†	πυρὸν φορμό[ς]	I, 138
ΠΗΙ	πυρὸν φορμό[ς]	I, 139

¹⁵⁷ Syll.³, 900, line 27. For other evidence of its use as a measure, see Hultsch, *Metrologicorum scriptorum reliquiae*, II, p. 216.

¹⁵⁸ Dittenberger (*loc. cit.*, note 12) regarded the price as an obvious exaggeration. However, L. Robert, *Études anatoliennes*, Paris, 1937, p. 346, has collected other examples of high prices during periods of scarcity.

¹⁵⁹ P. 44 (ed. J. Pierson, *Lexicon Atticum*, 1831). Cf. schol. Aristophanes, *Ranae*, 22. Hultsch (*Metrologie*², p. 108) computes 39.395 liters for the amphora.

¹⁶⁰ I owe the knowledge of this *sekoma* to the kindness of Dr. Virginia Grace and Professor G. Daux. Two photographs of it have now appeared in *B.C.H.*, LXXIX, 1955, p. 365.

Furthermore, wheat, along with barley, lentils and bitter vetch, was sold in Eretria in one lump sum as follows:

ΗΡΑ	ὀρόβον φορμοί ΓΙΙ	II, 91-95
	φακὼν φορμός Ι	
	πυρὼν φορμοί ΔΓ	
	κρι[θ]ὼν	
	μέ[διμ]νος	

From the three references in Stele I, we see that the price of wheat varied between 6 and 6½ drachmas per phormos. This variation is probably to be explained by the difference in quality of the wheat, as seems to be the case in an inscription containing prices paid for wheat in 329/8 B.C., where the record shows that most of the wheat brought six drachmas per medimnos, but ten measures were sold for only five drachmas.¹⁶¹

For purposes of comparison, the following table gives the known prices of wheat at Athens throughout the fourth century and in the first part of the third.

*Prices of Wheat at Athens*¹⁶²

Date	Price per medimnos	Reference
Beginning of fourth century	6	<i>I.G.</i> , II ² , 1356
393	3	<i>Arist., Eccl.</i> , 547-8
340-330	9	<i>I.G.</i> , II ² , 408, line 13
ca. 330	16	[Demosthenes], XXXIV, 39
	5	
330/29	5	<i>I.G.</i> , II ² , 360, line 9
329/8	6	<i>I.G.</i> , II ² , 1672, line 287
329/8	5 ¹⁶³	<i>I.G.</i> , II ² , 1672, line 288
324	5	<i>I.G.</i> , II ² , 360
295	300 or 1800 ¹⁶⁴	Plutarch, <i>Demetr.</i> 33

¹⁶¹ *I.G.*, II², 1672, lines 287-288.

¹⁶² This table is based on F. Heichelheim, *R.E.*, Supplement VI, s.v. *Sitos*, 887-888.

¹⁶³ The lower price in the same document is probably to be explained by inferior quality of the wheat.

¹⁶⁴ The preserved text of Plutarch states that 300 drachmas was the price for a modios (⅙ of a medimnos) during the siege of Athens by Demetrios Poliorketes. The lower figure rests on an emendation of the text by Wilamowitz and is the one frequently adopted; see W. S. Ferguson, *Hellenistic Athens*, London, 1911, p. 133 and A. Jardé, *Céréales*, p. 176, note 3. During the siege of Athens by Sulla, a medimnos of wheat brought 1000 drachmas; see Plutarch, *Sulla*, 13. The author of the second book of Aristotle's *Oeconomica* gives several examples of extortion rates in times of scarcity.

The average price of wheat at Athens in the fourth century B.C. according to this table was more than 6 drachmas per medimnos. In [Demosthenes], XXXIV, *Against Phormio*, 39, it is expressly stated that the normal Athenian price was five drachmas.¹⁶⁵ For prices elsewhere, the most convenient summary is given by Larsen from Delian figures.¹⁶⁶ "In 282 the average price of wheat for seven months was 6 dr. 5 ob. For 281 and 279 Jardé (173-175) estimates an average price of 9 dr. 5½ ob. and 8 dr. 3½ ob. respectively but considers these prices abnormally high. For the first part of the second century Heichelheim repeatedly lists but questions a price of 10 dr." ¹⁶⁷

For Roman prices of wheat there is considerable evidence, which has been summarized by T. Frank in *Economic Survey*, I, for various periods.¹⁶⁸ Three sesterces a modius (⅙ medimnos) was an average price for wheat in peacetime.

If we accept the identification of the phormos with the medimnos, the price of wheat in 414 B.C. was over twenty per cent higher than what is given in [Demosthenes] as the normal price. Our figures, moreover, give a slight clue to the cost of living at Athens. We know that the ration of the Spartan soldier in the field was one forty-eighth of a medimnos.¹⁶⁹ At our figures this ration would have cost 45 drachmas per year in a period when a workman earned a drachma per diem and worked 300 days per annum. This may be regarded as a maximum figure, for the Spartan soldier was given a very liberal allowance and his servant was given only half as much.¹⁷⁰

¹⁶⁵ *I.G.*, II², 400, speaks of 'the established price.'

¹⁶⁶ "Roman Greece," *Economic Survey*, IV, p. 384. Cf. Day, *Ec. Hist. of Athens*, p. 7.

¹⁶⁷ Cf. the table in L. Spaventa de Novellis, *op. cit.*, p. 49.

¹⁶⁸ Pp. 49, 77, 97-98, 158-159, 191-192, 283-284, and particularly 402-404.

¹⁶⁹ Herodotos, VII, 187; Thucydides, IV, 16; VII, 87. For detailed estimates of the cost of living in the third century, see the careful tabulations of Larsen, *op. cit.*, pp. 412-414.

¹⁷⁰ It may be noted here that two frequently quoted fifth-century prices have not been taken to refer to wheat. In Plutarch (*Solon*, 23) the price of grain is given as one drachma in the Solonian sacrificial valuations. The type of grain is not specified. Several scholars (Jardé, *Céréales*, pp. 123 and 178; M. N. Tod in *Cambridge Ancient History*, V, p. 25) regard it as barley. Secondly, Plutarch (*De tranquillitate animi*, 470 F) puts into the mouth of Sokrates the words ὀβολοῦ τὸ ἡμίετον. This would make the medimnos equal two drachmas. But the grain here specified is clearly *alphita*.

The evidence of the fifth-century sacred calendar in the Elgin Collection, which has been most recently published as *I.G.*, I², 842, is probably not to be connected with grain prices. The right side of this early *Fasti*, which exhibits a script with three-bar sigma, reads in part as follows: "Ἡρ[φ]ν πυρῶν δύο χοίνικε, τρεῖς ὀβελοί. Prott (*Leges graecorum sacrae*, I, Leipzig, 1896, p. 6), who published the text as no. 2 of his *Fasti Sacri*, stated that the form ὀβελός must refer to a loaf of bread, and there is ample evidence for the use of the form with this meaning, as it must now be noted against Prott's objections for its use as a coin. On the other hand, Hicks (*Ancient Greek Inscriptions in the British Museum*, I, Oxford, 1874, p. 136), who was the first editor of the text, believed that the reference was to the price of wheat: "To the two heroes, two choinixes of wheat, (price) three obols." This would make the medimnos, which contained 48 choinikes, amount to 12 drachmas. Böckh has suggested with reference to the prices in a similar sacred calendar that a considerable

OROBOS

The price of orobos can be roughly estimated from the five line entry in II, 91-95, the total of which amounted to 160 drachmas. If we allow $97\frac{1}{2}$ drachmas for the fifteen phormoi of wheat ($6\frac{1}{3}$ dr. per phormos) and approximately 3 drachmas for the medimnos of barley,¹⁷¹ we are left with $59\frac{1}{2}$ drachmas for the 7 phormoi of orobos and the one phormos of *phakos*. If the two latter sold at the same rate, the price per phormos would be $7\frac{1}{2}$ drachmas. Records of the sale of orobos are few. In a papyrus from Karanis dated in A.D. 191 (some 600 years later than our figure) the price of an artaba of orobos and an artaba of wheat is identical: eighteen drachmas.¹⁷² Barley, incidentally, was slightly more than one-half this price. In the Edict of Diocletian (A.D. 301) the price of orobos was fixed at the same price as wheat (*sitos*), 100 denarii for one castrensis modius.¹⁷³ As to the price of *phakos*, there is more abundant evidence from Egypt, for lentils were there equated with wheat in payment of tax.¹⁷⁴ Similarly, in the Edict of Diocletian, the maximum price of lentils was made the same as the price of wheat (*sitos*) and orobos.¹⁷⁵ Our figure then, which indicates that certainly orobos, and probably *phakos*, was a drachma per phormos higher than wheat, seems not entirely unreasonable.

OINOS

The two entries in our Stelai which preserved wine prices are as follows:¹⁷⁶

Price	Entry	Reference
[. .] ΗΡΑΔΔΔ	οἶνο ἀμφο[ρῆ]ς [---]	VI, 60-61
	ΡΑΔΔΔΔ τρ[ῆ]ς χόε[ς]	

profit was allowed to the priests (*Staatshaushaltung der Athener*³, I, p. 132); and hence that these documents should not be used as evidence for current prices (cf. J. H. Oliver, *Hesperia*, IV, 1935, p. 27). Other sacrificial calendars (cf. *S.E.G.*, X, 348) consistently establish prices, but such prices seem to be indicated by numerals. It is not clear where numerals would be inscribed in our text, which preserves both right and left sides at the place in question. Finally, Tod (*Num. Chron.*, 6th Ser., VII, 1947, p. 1) has defined these *obeloi* as 'spits' and has cited the parallel of a Coan sacrificial calendar. In any case, one would hesitate to use the lines in question as evidence for retail prices.

¹⁷¹ The price of barley was normally about half that of wheat; see Jardé, *Céréales*, pp. 182-183. Cf. Larsen, *op. cit.*, p. 384. In *I.G.*, II², 1672, lines 283 ff., 298 ff., where the price of wheat is given as 5-6 drachmas, the price of barley is 3 to $3\frac{5}{6}$ drachmas; and in *I.G.*, II², 408, the prices of wheat and barley are 9 and 5 drachmas, respectively.

¹⁷² E. J. Goodspeed, "Greek Papyri from the Cairo Museum," *University of Chicago Decennial Publications*, V, Chicago, 1904, p. 33.

¹⁷³ Col. I, 16.

¹⁷⁴ Grenfell, Hunt, and Hogarth, *Fayum Towns and their Papyri*, London, 1900, 101; and Westermann and Keyes, *Columbia Papyri*, Greek Series II, New York, 1932, I. 6.

¹⁷⁵ Col. I, 11.

¹⁷⁶ For the number of letter spaces in the sales prices, see below, p. 255.

[.]ΔΔ

οἶνο ἀμφορ[ε]ς Ἀττι[κῶ]
καθαρῶ ΗΗΗΗ ἐ[π]τὰ χό[ες]

VI, 64-65

Before any computation can be made with regard to the price of the wine, the meaning of the phrases 'three-choes' and 'seven-choes' must be determined. Are they modifiers which indicate the capacity of jars called amphoras, or do they refer to the quantity of the wine sold? It should be noted, as both Miss Mabel Lang and Miss Virginia Grace have kindly informed me, that there seem to be preserved from this period actual jars of the capacity of three choes and of seven choes, containers of different standard sizes.¹⁷⁷ Secondly, one might expect, *a priori*, that reference to three and seven choes, as quantities of wine sold, would be in the form χόες ΙΙΙ and χόες ΙΙΙΙ, just as the references to the *amphoreis* of wine were by numerical symbols. Thirdly, it may seem significant that if we have in the second entry 104 'seven-choes' amphoras, the price for the total sale can easily be completed as 520 drachmas, which would give an even number of five drachmas for the price of each amphora of wine. Furthermore, the price of the 590 'three-choes' amphoras of the first entry could be completed as 1180 drachmas, which would yield a price of 2 drachmas for each 'three-choes' amphora, a price which is very close to being three-sevenths of the price of 5 drachmas per 'seven-choes' amphora in the second entry. The ratio for the prices in the two entries, as restored, would be 2.46:1, which is almost exactly the ratio of the quantities.

Nonetheless, the writer believes that the syntax will not permit this interpretation: the 'three-choes' and 'seven-choes' must refer to the quantity of the wine sold. If the capacity of the jars were designated, one would expect either genitives of measure or adjectival forms in -χοος, not the nominative case. Such adjectival compounds (ἐπτάχοος, etc.) are collected in Buck and Petersen, *Reverse Index*, p. 178. This point of syntax is in my opinion fundamental. As to the use of cardinal numerals, it may be noted that they were several times used in this same inscription (lines 29, 68, 69, 70) in lines very near the passages under discussion. Furthermore, there are epigraphical parallels to the practice of putting large numbers as signs following the noun and smaller numbers as cardinal numerals usually preceding the noun; see *I.G.*, II², 1672, line 267 (κρι ΔΔΔΠΙΙ ἐκτεὺς τρεῖς χοίνικες), line 279 (μέδιμνοι ΧΗΠΙΙΙ ἡμικτεῖα τέτταρα δύο χοίνικες). For numerous other examples, see lines 264, 268, 269, 270, 270-271, 279, etc. As far as the even prices go, the two batches of wine need not have been of exactly the same quality, and so the achievement of the same price per unit in both entries need not be truly significant.

In our former entry, then, 6963 choes, or 590.25 metretes of wine were sold; in

¹⁷⁷ Also, see V. Grace's article "Standard Pottery Containers" in *Hesperia*, Suppl. VIII: "Ancient pointed amphoras available for measurement do actually show very considerable variations" (p. 176).

the latter, 1255 choes, or 104.58 metretes. A metretes contains twelve choes. The ratio of the quantities is 4.83:1.

To determine the numerals which may reasonably be restored for the cost prices of the two entries, the more significant figures for the prices of wine in classical antiquity have been collected. For the fifth century, there are no Athenian prices for wine preserved in literary sources unless we regard Hesychius' gloss on *Trikotylos oinos* as reflecting the price in the period of Old Comedy, as V. Ehrenberg does.¹⁷⁸ *Trikotylos*, which occurs in Aristophanes, *Thesm.*, 743, and in *adesp.*, 1320 (Kock, *C.A.F.*, III, p. 628) is defined by Hesychius as an obol's worth of wine. A metretes at this rate would be worth eight drachmas. In a fragment of Alexis,¹⁷⁹ the price of wine is given as ten obols a chous, which is at the rate of twenty drachmas a metretes, but the price appears to be an exaggeration in a comic author. Plutarch states that in the time of Sokrates a costly Chian wine was worth one hundred drachmas the metretes.¹⁸⁰

From the fourth century, we have the statement in [Demosthenes], XLII, *Against Phainippos*, 20, that wine was sold at a price of 12 drachmas a metretes, but later in the same oration the speaker states that wine had been disposed of at three times its former price.¹⁸¹ The latter price for the metretes would be only four drachmas. In [Demosthenes], XXXV, *Against Lakritos*, 10 and 18, there is reference to a marine loan, which usually amounted to fifty per cent of the capital required,¹⁸² on three thousand keramias of Mendeian wine at three thousand drachmas. The borrowers gave out, moreover, that they possessed security for three hundred drachmas more;¹⁸³ so the goods were valued at a price of two drachmas a keramion. In this sum was included the cost of the vessels, for reference is made to the stowage of the wine. If we assign a capacity of eight choes to the keramion as a unit of measurement, the figure used by Larsen for his Delian estimates,¹⁸⁴ the price of the wine would amount to three drachmas a metretes.¹⁸⁵

As instances of very low prices in extremely fertile areas outside of Greece,

¹⁷⁸ *Op. cit.*, p. 223.

¹⁷⁹ Kock, *C.A.F.*, II, 301.

¹⁸⁰ *De tranquillitate animi*, 470 F.

¹⁸¹ XLII, 37. Clearly, the barley, quoted with the wine, sold at a price much higher than normal.

¹⁸² See G. M. Calhoun, *Journal of Economic and Business History*, II, 1930, p. 581.

¹⁸³ See the commentary of Paley-Sandys, *Select Private Orations of Demosthenes*, 3rd edition, Cambridge, 1898, pp. 71-72.

¹⁸⁴ *Op. cit.*, pp. 393-395: "It is probable but not certain that when keramion was applied to a unit smaller than the 12-choes metretes it meant par excellence an 8-choes measure (cf. Viedebant, *s.v.* Κεράμιον, P.-W., XI, 254)." F. Heichelheim (*Schwankungen*, p. 111) regards the keramion as equivalent to 6 choes.

¹⁸⁵ Apart from literary references, graffiti on ancient jars may sometimes be interpreted as referring to the price of the contents. Some such were reported by L. Talcott in *Hesperia*, IV, 1935, pp. 495-496, 515-516.

Polybios states that the metretes of wine in the Po Valley was worth two obols and in Lusitania one drachma.¹⁸⁶ T. Frank states that these prices seem preposterously low, and he explains that neither area had an export market;¹⁸⁷ the normal Roman price was six to eight times the Lusitanian price. For Ptolemaic Egypt, Heichelheim has presented a lengthy table for the price of wine in which it appears that the cheapest price per *keramion*, which he regards as a half metretes, is 3½ drachmas and that the average is considerably higher.¹⁸⁸ Concerning Delos, Larsen has written, "The one definite fact known concerning the price of wine is that in 296 B.C. 1 metretes cost 11 dr."¹⁸⁹ He notes that the normal sum was 10 drachmas and in another context states that wine production could not have been profitable if the wine sold at 4 drachmas 3 obols a metretes.¹⁹⁰ The prices of wine at Rome are given by T. Frank in Volume I of the *Economic Survey*.¹⁹¹ In Diocletian's Edict, the entire second paragraph was devoted to the prices of wine. *Vin ordinaire* (10) sold for 8 denarii an Italian pint (one seventy-second of a metretes), but good Italian wines brought much higher prices.¹⁹²

To return to the problem of the numerals to be restored for the cost prices of the two entries, we may offer the following table for some of the lowest figures which may be restored.

<i>Wine Prices</i>		
<i>First Entry</i>	<i>Total Price in Drachmas</i>	<i>Price per Metretes in Drachmas</i>
(VI, 60-61)	380	.64
	1280	2.17
	2180	3.69
	5280	8.94
	6180	10.47
	etc.	etc.

¹⁸⁶ II, 15; and XXXIV, 8.

¹⁸⁷ *Economic Survey*, I, pp. 195-197.

¹⁸⁸ *Op. cit.*, p. 111. A. C. Johnson (*Economic Survey*, II, pp. 314-315) lists prices which will give about the same average. There are, doubtless, additions from recent papyrological publications. M. Segre, in identifying the figures 22 drachmas 1 obol with the price for a metretes of Cyprian wine, has noted some such prices in *Annuario della Scuola archaeologica di Atene*, XXVII-XXIX, 1949-1951, p. 322. For wine prices in Byzantine Egypt, see L. Casson, *T.A.P.A.*, LXX, 1939, pp. 1-16.

¹⁸⁹ *Op. cit.*, p. 392. For a more recent discussion of wine prices at Delos, see J. H. Kent, *Hesperia*, XVII, 1941, p. 312.

¹⁹⁰ *Op. cit.*, p. 394.

¹⁹¹ Pp. 193, 284, 355, 403-404.

¹⁹² We have not included in our study of the price of wine any reference to the graffiti on ancient amphoras (*Hesperia*, XXV, 1956, pp. 1-24). Their connection with wine is uncertain. Just as the stamnos was associated in our inscriptions with oil, olives, and vinegar as well as with wine, so we know from literary sources that the amphora was a container, for example, for oil, milk, and

<i>Second Entry</i> (VI, 64-65)	<i>Total Price in Drachmas</i>	<i>Prices per Metretes in Drachmas</i>
	120	1.14
	520	5.00
	1020	9.81
	etc.	etc.

For the second entry, which gives the price of domestic Athenian wine, described as *katharos* ('pure, unmixed'), I would favor the reading of the figures for 520 drachmas. This price would more nearly approximate the fourth century figure of four drachmas a metretes inferred from [Demosthenes], XLII, *Against Phainippos*, 20 and 31; and, secondly, it is hard to overlook the coincidence that the figure of 520 drachmas results in the even figure of five drachmas a metretes—disregarding the seven choes.¹⁹³

The first entry may well refer to unexported Thasian wine. The descriptive adjective of line 60 is unfortunately lost, but the five preceding lines (VI, 55-59) concern property on the island of Thasos, and lines 60-61, the concluding lines under the name of Adeimantos, may well be part of the Thasian list. The restoration of the sum of 2180 drachmas would give a ratio for the prices in the two entries of 4.19:1, which is close to the ratio of the quantities (4.83:1). The price of 3.69 a metretes might then be explained on the assumption that there was considerable war risk in a purchase made in Athens of wine on Thasos. On the other hand, Thasian wine was considered by Dionysos, in a fragment of Hermippos,¹⁹⁴ to be the best of wines, with the exception of Chian; so a figure of 8.94, 10.47, or higher for a metretes may seem preferable. There is scarcely evidence to permit a choice.

II. CLOTHING AND SHOES

The most convenient bibliography on clothing of the classical period is given by F. Heichelheim, *Wirtschaftsgeschichte des Altertums*, II, pp. 1048-49, note 35. Heichelheim includes articles in Daremberg-Saglio, *Dictionnaire*, and those published in Pauly-Wissowa, *Realencyclopaedie*, up to 1938. In addition, there is a spate of works on garments written primarily from the standpoint of the drapery in Greek sculpture. These include L. Heuzey, *Histoire du costume antique*, Paris, 1922; A. W. Barker, "Domestic Costumes of the Athenian Women in the Fifth and Fourth Centuries, B.C.," *A.J.A.*, XXVI, 1922, pp. 410-425; M. Bieber, *Griechische Kleidung*, Berlin and

pickled slices of dolphin (Simonides, 147; Diehl; Euripides, *Cyclops*, 327; Xenophon, *Anab.*, V, 4, 28). Presumably the contents could be extended to a wide variety of products. A price on an amphora is not, then, in itself necessarily an indication of the price of wine.

¹⁹³ Since the standard United States gallon is equivalent to 3.7853 liters, the metretes would amount to more than 10 gallons.

¹⁹⁴ Kock, *C.A.F.*, I, 249.

Leipzig, 1928, and *Entwicklungsgeschichte des griechischen Tracht*, Berlin, 1934; and G. M. A. Richter, *Sculpture and Sculptors of the Greeks*, rev. ed., New Haven, 1950, pp. 87-108. For ancient textiles in general, see the references given below, p. 249, note 250. On the whole, however, the author has found the article of Leroux in Daremberg-Saglio, *Dictionnaire*, s.v. *Pallium*, the most useful. This article is well documented in the references to ancient sources. For the unusual difficulty in the matter of defining articles of costume, reference should be made to the well-chosen introductory remarks of Buck, *Dictionary*, p. 416.

We may also present here for convenience a few references to prices in the literature where the garment is not specifically designated.¹ We learn from Eupolis (frag. 252) that in the twenties of the fifth century, a woollen garment was valued at 20 drachmas. In the *Ecclesiazusae* of Aristophanes (ca. 392 B.C.), a pauper who appeared at the Pnyx unclad is said to have announced himself in need of 16 drachmas for an outer garment.² Extravagant women paid as much as 1000 drachmas for garments.³

For literature concerning footwear, reference may be made to Hug in *R.E.*, s.v. *Schuh*. Of the works there cited, use has particularly been made of K. Erbacher's Würzburg dissertation (1914), *Griechisches Schuhwerk*.

As with clothing so with footwear, there are ancient references to prices for the general category (*hypodemata*). These include a passage in the *Plutus* of Aristophanes (388 B.C.),⁴ in which a young man asks an old lady for eight drachmas to purchase a pair of shoes. In the year 327 B.C. the accounts of the epistatai of Eleusis show a payment for shoes for 17 slaves at the rate of 6 drachmas per pair.⁵ Two prytanies later for the repair of the same number of shoes a payment of 4 drachmas per *zeugos* was made.⁶ In Lucian,⁷ a pair of woman's shoes, of Sikyonian manufacture, cost two drachmas.

¹ For the price of a chiton of wool at Delos, see G. Glotz, *Journal des Savants*, XI, 1913, p. 24

² Line 413.

³ *Adesp.*, 516 (Kock, *C.A.F.*, III, p. 503).

⁴ Line 983.

⁵ *I.G.*, II², 1672, line 105. Cato (*De agric.*, 59) assumes that a slave should have a pair of shoes every other year.

⁶ Line 190; cf. line 230. The passage in question reads as follows: ὑποδημάτων δημοσίοις κάττυσις, τοῦ ζεύγους Ἀπολλοφάνη Τυρμίδει ΗΗΗ, κεφάλαι ΠΔΠΗΗ. P. Guiraud (*La Main-d'oeuvre industrielle dans l'ancienne Grèce*, Paris, 1900, p. 190) states that the price of repair was 2 drachmas per pair. This would apparently require that we interpret *zeugos* as totalling four shoes. But it is clear, for example, from the phrase ζεύγος ἐμβάδων in Aristophanes, *Equites*, line 872, that *zeugos* here means only one pair of slippers. The Sausage-seller gives the slippers to Demos to wear. It should be noted that the word κάττυσις (Attic), or κάσσουσις, known only from *I.G.*, II², 1672, lines 190 and 230, does not appear in Liddell-Scott-Jones. See, however, Buck and Petersen, *Reverse Index*, p. 595.

⁷ *D. Meretr.*, 14, 2.

Our evidence concerning clothes and footwear is very scattered, but no prices seem to be cheap in terms of work-days.

The following table lists references to prices contained in *Economic Survey*, I-V. For the most part, references are to general terms for clothing and shoes and they afford little evidence for the prices of the specific items preserved in our lists.

<i>Source</i>	<i>Volume</i>	<i>Pages</i>	<i>Items</i>
Rome	I	194, 200	Clothing
Egypt	II	318-320	Clothing, Shoes
Syria	IV	179	Clothing allowance to one's wife ⁸
		186-187	Clothing
Greece	IV	399-400	Clothing
Diocletian	V	351-353	Shoes
Edict		369 ff.	Clothing

1. ἀμπέχονον (I, 160). Mantle or shawl. The garment is discussed in connection with the himation by G. Leroux in Daremberg-Saglio, *s.v.* *Pallium*, 290 b. It is here described as a Dorian mantle worn by the Syracusans of Theokritos, and reference is made to Theokritos, 15, 21. Gow in his study of this idyll has defined the *ampechonon* as a "wrap, regularly worn by women at this period, which resembles an ample himation, but is often made of thin and clinging materials which allow the heavier folds of what is worn beneath to show through. It can be draped about the figure in a great variety of ways, but when worn out of doors most usually envelops both arms and also hoods the head." ⁹ He provides illustrations from terracotta figures. Praxinoa's ampechonon was put on last and was torn in the crowd. In *I.G.*, II², 1514 ff., the inventories of the overseers of Artemis Brauronia, the ampechonon appears as distinct from the himation.

2. ἐξωμίς (VII, 107-111). Type of chiton or tunic. The garment was worn in such a way as to leave the right shoulder bare and the arm free. The *exomis* is the ordinary dress of workers and craftsmen, human and divine; it is a short plain rather scanty garment, usually, as seen on the monuments, of some fairly heavy material. ¹⁰

⁸ This interesting passage from the Talmud of the first or second century after Christ specifies the minimum allowance to be made by a husband to his wife. The annual allowance included a hat, an apron, new shoes for each major festival and new clothes to the value of fifty denarii. This was prescribed for the poorest.

⁹ *J.H.S.*, LVIII, 1938, pp. 185-186.

¹⁰ Cf. e. g., the vase-painter at work, on the bell-krater in Oxford, Cloché, *Classes*, etc., pl. XXII, 1; or, for Hephaistos, an oinochoe in New York (Richter and Hall, *Red-Figured Athenian Vases in the Metropolitan Museum of Art*, New Haven, 1936, pl. 142, no. 140). Here the contrast between this garment and the fuller, often pleated, and much thinner short chiton, likewise often worn *exomos* by horsemen and others and called by convention chitoniskos, is plainly seen; Hephaistos

For a description of this garment, see Heuzey, *op. cit.*, pp. 37-62; and Amelung, *R.E.*, s.v. *Χιτών*, 2328-2330.

Aristophanes (*Vespae*, 444) enumerates the exomis among the garments which a master provides for his slaves. We are fortunate in possessing in the Eleusinian building accounts of the year 327/6 three entries for exomides purchased from various *himatiopolai* for public slaves.¹¹ The first entry was for eleven garments at 7 drachmas 3½ obols each; the second for thirteen garments at 7 drachmas 1 obol; the last for four garments at 7 drachmas 4 obols. The average price for the 28 exomides was roughly 7 drachmas 2½ obols. Sokrates says in Plutarch (*Mor.*, 470 F) that the price of the exomis at Athens was 10 drachmas.¹²

3. *ἱμάτιον* (I, 189-201, 209-210; VII, 101-106). Cloak, or loose outer garment.¹³ The *himation*, worn by both men and women, was a large rectangular piece of cloth, seven or eight feet long, which could be wrapped about the body in every conceivable way; it is familiar from innumerable representations in vase-painting and sculpture. For the great variety of cloaks, see Heuzey, *op. cit.*, pp. 85-113; G. Leroux in Daremberg-Saglio, *Dictionnaire*, s.v. *Pallium*; and Amelung, *R.E.*, s.v. *ἱμάτιον*.

In the *Plutus* of Aristophanes (388 B.C.), the young man asks the old lady whom he was pretending to woo for 20 drachmas to purchase an himation.¹⁴ He doubtless had in mind one of superior quality.

In 329 B.C. the cost to the state of himatia for 17 slaves was 314 drachmas 3 obols.¹⁵ The purchase was made from a Megarian, Antigenes. The price for each himation was 10 drachmas 3 obols. In the Delian records of the third century B.C., a man's himation in 279 cost 24 drachmas;¹⁶ in 274, 22 (?) drachmas;¹⁷ in 269, 20 drachmas.¹⁸ For 200 B.C. there are recorded two purchases of a man's himation for 20 drachmas and one purchase of a woman's himation at 30 drachmas.¹⁹ All of these Delian garments, as well as the Athenian garments of 329 B.C., were for slaves and must have been of a cheaper sort. In 92 B.C., the maximum value of himatia which could have been worn in connection with the mysteries of Andania in Messenia varied

wears the exomis proper to his trade but his companion Dionysos wears the thinner more elaborate short chiton.

¹¹ *I.G.*, II², 1673, lines 45 ff. Of the four *himatiopolai* named in these lines and in *I.G.*, II², 1672, line 103, three were Megarians.

¹² Cf. *I.G.*, XI, 2, 287 A, line 87, where the price of a chiton is given as 10 drachmas.

¹³ For the derivation of the word, see, in particular, W. Petersen, *Greek Diminutives in -ιον*, Weimar, 1910, p. 46; and Buck, *Dictionary*, pp. 395 and 416.

¹⁴ Lines 982, 983.

¹⁵ *I.G.*, II², 1672, lines 102-103.

¹⁶ *I.G.*, XI, 2, 161 A, line 117.

¹⁷ *I.G.*, XI, 2, 199 C, lines 59-60.

¹⁸ *I.G.*, XI, 2, 203 A, line 60.

¹⁹ For references, see J. A. O. Larsen, "Roman Greece," *Economic Survey*, IV, p. 399.

from 50 to 200 drachmas.²⁰ These values of course were for finer garments. For prices of himatia in Egypt, see A. Segrè, *Circolazione monetaria e prezzi nel mondo antico*, Rome, 1922, p. 161.

Of the various items of clothing in our lists, the himatia are the only ones for which there is a clue as to the price. The sales tax for a single himation was 3 drachmas.²¹ The price, then, falls into the 5-50 drachmas bracket.

4. κρόκη (I, 212). Woollen cloth. The word is derived from κρέκω, and etymologically means the 'woof, thread which is passed between the threads of the warp.'²² In the passage of Euripides cited in Athenaeus, X, 413 d and in Aristophanes, *Vespae*, 1144, the reference is to the 'nap' of the woollen cloth. In Pindar, *Nem.*, 10, 83, *kroke* seems to be used for a cloak of woollen texture. In Sophocles, *O.C.*, 474, it is woollen cloth.

Kroke in our list is qualified by the adjective θαψίνη. This word, describing the color of the cloth, takes its name from the *thapsos*, the fustic plant from the island of Thapsos which is called by modern botanists *Thapsia Asclepium* L.²³ A plant used by dyers,²⁴ it imparted a yellow cadaverous or sallow hue which was associated with the pallor of sickness and death.²⁵ Plutarch associates *thapsine* with the color of the fillets or headbands which entwined the mystic *koitai*, or chests.²⁶ Significant for the meaning of *kroke* in our texts is its position between two entries for the same word, *koite*, 'chest.' Our yellow-colored woollen cloth must have been contained in or been used as a cover for the chests.

If our arrangement of fragments *d* and *h* of Stele I is correct, a very rough approximation of the cost of the material can be obtained. Only the first numeral of the sales tax is preserved, but this is an obol sign, which means that the price of the cloth was some figure between one obol and 49 drachmas 5 obols.

5. τρίβων (II, 105-111). Thick cloak or mantle. For a description of the various types, see M. Brillant in Daremberg-Saglio, *Dictionnaire*, s.v. *Tribon*, also G. Leroux, s.v. *Pallium*, p. 290a; and E. Schuppe, *R.E.*, s.v. *Tribon*. It is noted by these authors that the original and early use of this word had nothing to do with 'used or ragged clothing,' but that the *tribon* was rather a particular type of dress. The definition of

²⁰ *Syll.*³, 736, lines 15-20.

²¹ I, 209-210. The sales tax is inscribed on one stone, the word *himation* on another. Their position with relation to one another is determined by counting upwards from the original last lines of columns III and IV of the stele.

²² See Boisacq, *Dictionnaire*⁴, s.v. κρέκω. It is not to be confused with *kroke*, meaning 'pebble,' which is of different derivation.

²³ See Blümner, *Technologie*, I², p. 251, and IV, p. 522.

²⁴ See V. Chapot in Daremberg-Saglio, *Dictionnaire*, s.v. *Tinctur*, p. 340 b.

²⁵ Aristophanes, *Vespae*, 1413.

²⁶ *Phocion*, 28.

Liddell-Scott-Jones, 'worn garment, threadbare cloak,' is, therefore, not complete. The Spartans wore a rather short himation, made of a warm and rough material, often doubled, which was called the tribon or *tribonion*.²⁷ It was introduced into Athens following the Persian Wars, but was worn chiefly by young men, and was looked upon as a sign of poverty.²⁸

6. Ἀμυκλάδια, τά (II, 203-204). Amyclean shoes. Amyclae was a city in Laconia. Hesychius defines Ἀμυκλᾶδες as an expensive type of Laconian shoe. For a description of the shoes, see Erbacher, *op. cit.*, pp. 1-2; and Hug, *R.E.*, s.v. *Schuh*, 748.

7. ἀσκέρα (II, 148). Shaggy shoe for winter wear.²⁹ Suidas terms it an Attic shoe. For reference to the particular type of shoe, see Erbacher, *op. cit.*, p. 3; and Hug, *R.E.*, s.v. *Schuh*, 748.

8. κονίπους (VI, 38; see below, p. 230, note 129).

This form [κονί]ποδες, suggested by the fact that the item came from the property of a shoemaker, was offered as a restoration for line 38 of Stele VI. Tod, however, has kindly invited my attention to the fact that the substitution of the restoration [σκήμ]ποδες would have the advantage that a fairly homogeneous group would then be listed in consecutive lines. Lines 38-42 and possibly lines 35-42 (see below, s.v. κρουπέζιον) would be items of furniture. This would seem a more probable restoration.

It may be mentioned that the *konipous* was a type of sandal which covered only part of the foot. The earliest mention of it is in Aristophanes, *Eccl.*, 848, where the context shows that it was rather elegant.³⁰ A. A. Bryant suggests that it may have been a kind of Chinese slipper without straps.³¹ For references and a description, see Erbacher, *op. cit.*, pp. 12 and 33.

9. κρηπίδιον (II, 205). Type of sandal. The only meaning cited for *krepidion* in Liddell-Scott-Jones is 'kerb,' which is doubtless derived from the general meaning of 'groundwork, foundation' of *krepis*.³² Since our word occurs after the entry for a pair of Amyclean shoes, it must be taken as the diminutive of *krepis* in the meaning of a type of sandal.³³ Liddell-Scott-Jones has defined *krepis* as 'man's high boot, half boot,'³⁴ but this meaning was corrected in the *addenda* (p. 2085) to 'shoe with

²⁷ Plato, *Prt.*, 342; Xenophon, *Lac.*, II, 4; Demosthenes, LIV, *Against Konon*, 34. Cf. Plutarch, *Nicias*, 19; Athenaeus, XII, 535 e.

²⁸ Aristophanes, *Eccl.*, 850; Isaïos, V, *Estate of Dikaiogenes*, 11.

²⁹ So Pollux, VII, 85.

³⁰ Cf. the translation of Van Daele, 'fines sandales,' and see the commentary of Van Leeuwen, *ad loc.*

³¹ *H.S.C.P.*, X, 1899, p. 79.

³² For *krepis*, see Buck, *Dictionary*, p. 428, who derives it probably from *(s)ker- 'cut.'

³³ The suffix *-ion*, when applied to footwear, usually has the meaning 'belonging to the category of'; see Petersen, *op. cit.*, p. 96.

³⁴ Also Bryant, *op. cit.*, p. 85.

upper or straps covering, or partly covering, the foot.' Gow, on the authority of Plutarch and Pliny, has defined the krepis as "a nail-studded sole with loops at the side by which it was laced to the foot."³⁵ Hippokrates, as cited by Galen,³⁶ the most ancient authority, recommended his contemporaries to "wear shoes fitted with lead, fastened on the outside by ties (straps) and having the same properties as the krepida of Chios." This probably means a heavy peasant's shoe, suitable for long walks, in which the nails of the sole are replaced by lead plates(?). E. Pottier in Daremberg-Saglio, *Dictionnaire*, s.v. *Crepida*, states that such shoes can be seen in parts of modern Greece; his article fully illustrates the sandal. See also Erbacher, *op. cit.*, pp. 12-13, and Bieber, *R.E.*, s.v. *Krepis*.

10. *κρουπέζιον* (VI, 35; see below, p. 241). The form [*κροπέ*]ζιον, which occurs in Pollux, X, where so many of our items are found, was offered as a restoration in line 35 of Stele VI. The item had belonged to Aristarchos the shoemaker. But the use of the singular number seems to weigh against this restoration, and the reading [*τραπέ*]ζιον, therefore, may be substituted.³⁷

Pollux (VII, 87) refers to *κρούπεζα* as shoes with wooden soles. Kratinos (frag. 310: Kock, *C.A.F.*, I, p. 103) mentions these as Boeotian. They correspond to the Roman *scabellum* and are illustrated in Daremberg-Saglio, *Dictionnaire*, IV, 2, pp. 317 and 1106. For further description, see Erbacher, *op. cit.*, p. 14; and Hug, *R.E.*, s.vv. *Schuh*, 757; and *Sculponea*, 909.

11. *σκιάδειον* (II, 144). Parasol. The history of the parasol is given by G. Nicole in Daremberg-Saglio, *Dictionnaire*, s.v. *Umbrella*. The word is not mentioned in Greek authors until a date roughly contemporary with our inscription,³⁸ but the diminutive form *σκιαδίσκη* occurs in Anakreon (frag. 54, line 11: Diehl). The *skiadeion*, however, was commonly represented on vase paintings at least as early as the late sixth century B.C.,³⁹ and later especially in works of Myson, the Pig Painter, and the Mannerists generally. Vases with representations of parasols have been studied particularly in connection with the festival Skira.⁴⁰ Deubner has noted that there are a great number of vases in which men clothed as women or women clothed as men carry parasols.⁴¹ Beazley has described these figures as komasts. The footnotes

³⁵ *J.H.S.*, LVIII, 1938, p. 190. He cites Plutarch, *Alex.*, 40, *al.*; Pliny, *N.H.*, XXXV, 85; XXXVI, 127.

³⁶ *Art.*, IV (C. Kühn, *Medicorum Graecorum Opera*, XVIII, p. 678).

³⁷ See Buck and Petersen, *Reverse Index*, p. 72.

³⁸ Aristophanes, *Equites*, 1348; *Aves*, 1508, 1550; *Thesm.*, 823, 829; Eupolis, frag. 445 (Kock, *C.A.F.*, I, p. 367), etc..

³⁹ Naples 2729, *C.V.A.*, pl. 27; and Beazley, *A.R.V.*, p. 123, no. 29.

⁴⁰ For a recent discussion of this festival, see F. Jacoby, *F. Gr. Hist.*, 328 (Philochoros), Notes, pp. 194-195.

⁴¹ *Attische Feste*, Berlin, 1932, p. 49. Caskey and Beazley, *Attic Vase Paintings in Boston*, II, London and Boston, 1954, p. 56.

of the publications of these two scholars contain numerous references to the ceramic literature. On the Parthenon frieze, Eros holds a parasol to protect Aphrodite.

III. FURNITURE

Our record of the sale of confiscated furniture seems to show that there was little sense of personal luxury in Athens in the last quarter of the fifth century, even among men of wealth. Doubtless the couches, chairs, and tables listed had the same elegant lines as the furniture pictured on vases and in reliefs, but there is no least suggestion of the later kind of lavishness which brought Cicero, for instance, to pay 12,000,000 sesterces for a table of rare citrus wood. Greek furniture makers knew how to make pieces that were costly as well as beautiful, but such elaborate products were not intended for private use. Stools of ebony, couches inlaid with ivory, chests of rare woods, tables with golden legs, and others covered with silver, are carefully listed as such in the temple inventories of Athens, Eleusis and Delos, but the furniture from the houses of the companions of Alkibiades was for the most part made simply of wood. A few decades later Lysias, in arguing that Aristophanes had lived modestly, maintained that the wealth of prominent men was always being overestimated by the people; Aristophanes, he said, had had to borrow table vessels when he entertained important guests, and in truth, many of the representatives of the old rich families could make no show at all in the way of furniture.¹ Though they may be exaggerated, Lysias' remarks reflect a kind of distaste for any exhibit of private wealth, a distaste which must have been prevalent enough at the close of the Periclean age to influence even the circle of Alkibiades in its manner of living.² Indeed, it is possible that these young men went further than most, and affected certain "Spartan" simplicities.

Even for plain furniture the prices listed in the Attic Stelai are remarkably low. When the property of Aristophanes was sold, that same household equipment which had had to be pieced out with loans from friends brought 1000 drachmas;³ presumably this included the furniture, dishes and utensils (but not the doors, which had been stolen) of a fairly typical Athenian town house belonging to a man of some prominence. Yet if we use the furniture prices found in our list and mentally furnish such a house, it is almost impossible to reach a total expenditure much over 500 drachmas. Does this really mean that the friends of Alkibiades lived about as rudely as the Naxian farmer whose furniture, according to a mortgage stone of *ca.* 300 B.C., secured 500 drachmas of dowry?⁴ Probably not; rather, the low prices should be considered as

¹ Lysias, XIX, *Property of Aristophanes*, 30.

² It is tempting to try to draw some conclusion from a fragment of Eupolis' *Poleis*, where household equipment is listed, but there is no knowing whether this catalogue was supposed to apply to a poor or rich, country or city, house (frag. 228: Kock, *C.A.F.*, I, p. 320).

³ Lysias, XIX, 31.

⁴ *I.G.*, XII, Suppl., 195; see Finley, *Studies in Land and Credit in Ancient Athens*, New

a result of the low demand even among the wealthier citizens of Athens for commodities like furniture, after so many expensive years of war.

Table A, wherein the furniture prices in the Attic Stelai are summarized, may help to make clear our statement about the cost of furnishing the typical Athenian house. Assume even a very large town house with an upstairs room, and a family of four adults, three children and fifteen slaves living comfortably: ⁵ if the prices of the required items of furniture, as given in our list, are totalled, the result, after amounts for utensils and furnishings have been added, is a figure of something near 650 drachmas.

TABLE A. FURNITURE PRICES

ARTICLE OF FURNITURE	ATTIC STELAI		DELOS		ELSEWHERE IN GREECE	
	<i>drachmas</i>	<i>obols</i>	<i>drachmas</i>	<i>obols</i>	<i>drachmas</i>	<i>obols</i>
ἀνάκλισις	2	1				
	or 6	1?				
βάθρον	1	1				
δίφρος	1	2				
ἐπίκλιντρον			1	5		
θρανίδιον	5					
θρόνος						
θύρα			18		Epeidauros 3rd c.	
					{ 39	2
					{ 20	3
διάπριστος	20	4				
συνδρομάς	11	3½				
κιβωτός (θυριδ.)	21				Eleusis 4th c.	
					20	
κλίνη	{ 6				Epeidauros ca. 300 B.C.	
	{ 6	4	19		12	
	{ 8	1				
Μιλησιουργής	{ 8	1				
	{ 7	3				
κλινίδιον	6	1				
κλιντήρ						

Brunswick, 1951, p. 72. In addition, it should be noted that Finley (*Political Science Quarterly*, LXVIII, 1953, p. 255) believes that the property marked by a horos was as a rule worth at least twice the amount of the indebtedness.

⁵ The figures for slaves are an extreme. I am well aware that Professor Gomme (*J.H.S.*, LXVI, 1946, p. 128) would not allow, on the average, more than one domestic servant per adult among the hoplite and richer classes, very few among the thetes.

	less than		
κοίτη	5		
λυχνεῖον		1	
παραπέτασμα	10	1	
πίναξ	6	4	12-100
πρόσκληντρον			
σκήμπους		2	
τράπεζα	4		4 3
τετράπους	6	2	
φάτνη	10	1	
χάμεννα	17		

The economic picture which emerges from this chapter on Greek furniture is of a relatively simple mode of life. The words of Rostovtzeff, descriptive of the later, Hellenistic, period, could equally well be cited for the fifth century: "House furniture was very scanty: it consisted of a few couches, chairs, tables, and chests of various forms. In rich houses, couches for example—the best known pieces of furniture—were real products of art, being adorned with bronze sculptures (on the legs, backs, and side-supports), inlaid with ivory and coloured glass, and covered with fine mattresses, rugs, and pillows. But in the average houses all the articles of furniture were of plain design and cheap material. Table and domestic utensils, including lamps, were mostly of clay and of comparatively few shapes and plainly made."⁶ Rostovtzeff's statement may be compared with the opening sentence of Richter's book on Greek furniture: "When we begin to study Greek furniture nothing is more striking than the comparative simplicity of the life of the Greeks." By modern standards, certainly, the Greek house must have been relatively empty.

The present chapter can be regarded only as an approach to the study of Greek furniture. Probably in no other section of this work has the need been more obvious for an authoritative work defining and illustrating all of the words studied. The present writer has of course restricted his investigation to those terms which occur in the Attic Stelai. But there is unquestionably material for an investigation of the meaning of numerous related words. Present studies do not begin with the literary material and are concerned for the most part with artistic representations and their development.

Miscellaneous household furnishings, like pillows, bedspreads, and curtains, have been considered with the furniture. From archaic times Greeks were fond of piling their couches and chairs with colored cushions, and of draping them with rugs and tapestries.⁷ It may have been in his choice of furnishings that an Attic householder

⁶ *Soc. and Ec. Hist. of Hell. World*, II, pp. 1203-1204.

⁷ See G. M. A. Richter, *Ancient Furniture*, Oxford, 1926, figs. 6, 7, 69, 113, 118, 121, 152, 159, 161, 162, etc.

could proclaim his taste, for we find a plain hanging which sold for 10 drachmas, suggesting that the embroidered ones may have brought as much as two couches, or three tables, or even the price of a house door.

Those words for furniture which occur in the Attic Stelai have been studied under the following headings in this order: 1. Chairs. 2. Chests and Boxes. 3. Couches and Beds. 4. Doors. 5. Lampstands. 6. Tables. 7. Furnishings. The Greek words are arranged alphabetically under each heading.

CHAIRS

There are six terms used in the Attic Stelai for pieces of furniture meant to be sat upon, and one more, *klinter*, which seems to have denoted something between a chair and a couch. Fifth-century painting and sculpture are rich in representations of various sorts of seats, but it is sometimes difficult to establish a definite relation between a given term and one of the pictured pieces of furniture. Richter, in her *Ancient Furniture*, has made only three large distinctions: the throne, the chair with a back (which she calls simply *klismos*), and the stool. There are two articles in the Daremberg-Saglio *Dictionnaire* (Saglio, *s.v. Cathedra*, and Chapot, *s.v. Sella*) and one by Hug in *R.E.*, *s.v. Stuhl*, but in none of these is there much attempt at a close consideration of the differences between various sorts of chairs.

1. ἀνάκλισις (I, 236). Chair having a back. This term appears only once in our list, in a group of furniture items. Wilhelm⁸ assumes that *anaklisis* equals *anaklintron*, and refers to Pollux, VI, 9, where *anaklintron* is listed as a part of a bed, the same as is referred to by Aristophanes, *Eccl.* 907, as *epiklintron*. Phrynichos, 130 (ed. Rutherford, p. 207), stated that it was proper Attic usage to say *epiklintron*, not *anaklintron*, and thus in another passage on beds Pollux (X, 34) uses only the term *epiklintron*. It has been assumed⁹ that all three words might apply to the raised end of a couch, on which one might rest an elbow while dining, or lean his head for sleep. In support of this interpretation we find that Hesychius defines *amphikephalos* as a bed which had an *anaklintron* at both ends.

However, if we do not immediately accept the equation of terms made above, but consider only the uses of the special term *anaklisis*, the result is somewhat different. In Attic inscriptions this word is associated not with couches but with various sorts of chairs. A typical entry is that of *I.G.*, II², 1421, lines 97-99: *θρόνοι μεγάλοι τρεῖς οὐκ ὑγιᾶς ἀνακλίσεις ἔχοντες ἡλεφαντωμέναι*.¹⁰ In *I.G.*, IV, 39, line 9 it is a *bathron* which has an *anaklisis*. There might be some doubt as to whether this part of the chair were the back or the arms, since according to Richter the *thronos* might appear with back

⁸ *Jahreshefte*, VI, 1903, p. 240.

⁹ Ransom, *Couches and Beds*, pp. 109 and 111.

¹⁰ Cf. *I.G.*, II², 1415, line 26; 1425, lines 206-207; 1460, lines 6-7.

or arms, or both, or neither;¹¹ fortunately another item in a furniture list makes it clear that an anaklisis is the back, against which one leans. In *I.G.*, II², 1379, line 4, there is an *okladia* ('folding chair') which has an anaklisis;¹² the singular could conceivably be used for a pair of arms, but examination of vase-painting representations of *okladias*¹³ shows that the Greeks sat on their folding chairs with the two rigid edges of the seat at front and back, unlike moderns. If the stool was to be collapsible an anaklisis could be added only at the back. The meaning 'chair-back' which is thus revealed is borne out in *Et. Mag.*, s.v. *κλιντήρες* where that elongated chair or chaise-longue is described as having an anaklisis.

In all the cases listed above, the anaklisis is clearly described as a part of a chair item. There is, however, one inscription besides our own which lists it separately, as though it were not a part of anything but an independent item. This is a dedicatory inscription from western Cilicia belonging to the Roman period: the priest of a temple of Hermes records that he provided from his own funds the anaklisis, the *apoklimakosis*, and the *mageireion* for the temple.¹⁴ Hicks has suggested that the first gift may have been an outdoor bench of some kind; whether or not this was the case, in the absence of any modification it must have been, if a piece of furniture, a whole piece.¹⁵ Another inscription lists its later repair.¹⁶ Robert has reported an inscription from Asia Minor which lists four *ἀνακλιντήρια* as separate items; the editor, in rejecting the sense of 'couch- or chair-rests' for this term, compares it with the anaklisis of the Attic Stelai, and would define both as comfortable chairs, having backs.¹⁷ This seems to be the best meaning for the item as it stands in our list, since it was sold separately as a whole piece of furniture.

Price. The price of the anaklisis in our inscription was at its lowest 2 drachmas 1 obol; the next possible price is 6 drachmas 1 obol. If what was sold was something like one of the elegant curved-backed chairs so often seen on vases,¹⁸ or if it was similar to the *klinter*, which Hesychius called a *δίφρος ἀνάκλιτος*, the higher price (nearly the same as the price of a *kline*) is appropriate. If on the other hand it was a plain straight chair having a back, then the lower price would be suitable, since a *bathron* sold for 1 drachma 1 obol.

¹¹ Richter, *op. cit.*, pp. 2-29, *passim*.

¹² Hug, *R.E.*, s.v. *Stuhl*, assumes that a folding stool never had a back. See Daremberg-Saglio, *Dictionnaire*, II, 480, fig. 2609, for a picture of one, from Roman times.

¹³ Richter, *op. cit.*, pp. 39-43; no folding stools with backs are shown, however.

¹⁴ *J.H.S.*, XII, 1891, p. 232.

¹⁵ It should be noted that Robert, *Hellenica*, IX, 1950, p. 46, note 2, says of this item, with no explanation: "*ἀνάκλις* ne peut guère s'appliquer à un meuble." Perhaps in this context, as H. A. Thompson has suggested to me, the meaning is 'ramp.'

¹⁶ *J.H.S.*, XII, 1891, p. 233.

¹⁷ *Hellenica*, IX, 1950, pp. 39 ff.

¹⁸ See Richter, *op. cit.*, figs. 129-150.

2. *βάθρον* (II, 145; III, 11; V, 12). Bench, stool. *Bathron* is used for 'that on which anything steps or stands' (Liddell-Scott-Jones);¹⁹ there are three treatments of the word as an article of furniture in Daremberg-Saglio, *Dictionnaire*. Girard (II, 468), citing Plato, *Protagoras* 325 e, translates the word as 'escabeau,' a stool or backless seat, and gives several illustrations from vases depicting school scenes.²⁰ Saglio (IV, 1111), equating *bathron* with Latin *scamnum* and *scabellum*, regards it as a footstool. Sometimes it was independent of the bed or chair; sometimes attached.²¹ It served to help the person get up, or as a footrest. Chapot (IV, 1551), equating it with *subsellium*, regards the *bathron* as a seat in the form of a bench, often large enough for several people.²² The most detailed study of the word is that of Hug in *R.E.*, s.v. *subsellium*. He refers to frescoes from Pompeii, reproduced in Blümner, *Technologie*, I², pp. 309 ff., which illustrate this particular type of bench.

In the Attic Stelai, *bathron* is grouped in II, 145, with *thronoi* and *diphros*; in V, 12, with wooden household articles; and in III, 11, the entry is placed a few lines away from those for beds. The most appropriate of its various meanings for our context, therefore, seems to be 'seat, bench' (Liddell-Scott-Jones, no. 5), or 'stool.'

Price. The price of one *bathron*, in III, 11, if the restoration of the singular number, as seems probable, is correct, is one drachma one obol.

3. *δίφρος* (I, 235; II, 146, 223, 227). Backless stool. The *diphros* is usually taken to mean a stool without arms or back;²³ however, the word is sometimes used by ancient authors as a general term for any kind of seat.²⁴ It is also used on occasion for that part of a chair on which one sat, whether or not the chair had a back, for Erotian²⁵ says *πᾶς γὰρ δίφρος ἀνάκλισμον ἔχων Θεσσαλικὸς παρὰ τοῖς παλαίοις λέγεται*, and cites Hippokrates, *Art.*, 7, where a person is to sit in a chair (*μέγα ἔδος Θεσσαλικόν*), upon the seat (*ἐπὶ τῷ δίφρῳ*), resting his arm on the back (*ὑπὲρ τοῦ ἀνακλισμοῦ*).²⁶ Yet despite these special uses, *diphros* did ordinarily mean a backless stool; Plutarch²⁷

¹⁹ Cf. Boisacq, *Dictionnaire*⁴, s.v. *βαίνω*. For inscriptional meanings of *βάθρον*, not found in Liddell-Scott-Jones, see Ebert, *Fachausdrücke*, p. 62. Cf. *I.G.*, II², 1672, line 149.

²⁰ Cf. Demosthenes, XVIII, *De Corona*, 258.

²¹ For illustrations, see Deonna, *Le mobilier Délien*, Paris, 1938, p. 11. It should also be noted that *ὑπόβαθρον* was used for footstool (*I.G.*, II², 1485, line 54).

²² Ehrenberg (*People of Aristophanes*², p. 101, note 3) has asked the question whether *bathra* in Phrynichos, frag. 3 (Kock, *C.A.F.*, I, p. 370) refers to the seats in the theatre. The word would here seem, as Meineke concluded, to refer to the benches in the courtroom or the lecture room.

²³ Richter, *op. cit.*, pp. 30 ff.; Hug, *R.E.*, s.v. *Stuhl*. The latter article is the most detailed and contains useful bibliography, but epigraphical references are still made to *C.I.A.*

²⁴ For instance, Aelian, *Var. Hist.*, IX, 3; Herodotos, III, 146.

²⁵ IV, 36, s.v. *ἔδος*.

²⁶ Hug, *op. cit.*, seems not to know this passage, for in discussing the Thessalian *diphros*, which is also mentioned by Pollux (X, 47; VII, 112) and Athenaeus (XIII, 568 d), he says we have no way of knowing what sort of pieces these Thessalian stools were, but that they probably were decorated with color and had soft seats.

²⁷ *Lyc.*, 9.

distinguished *klinteres*, which had backs, from *diphroi*, and Hesychius makes the difference clear by defining a *klinter* as a *diphros anaklitos*: evidently one did not lean back in a plain *diphros*.

The *diphros* is said by Athenaeus (V, 192 e-f) to be meaner than the *thronos* or *klismos* (see *Od.*, XX, 259), but this is contradicted by its frequent mention in other authors as the seat of a wealthy or lordly man (as in *Od.*, XIX, 97, 101; XXI, 177) and by the fact that it was the term used to designate the chair of a Roman magistrate.²⁸ The *diphros* could be very plain and cheap, but it was not necessarily so; its essential characteristic seems to have been lightness and portability, for it was a *diphros* that was most commonly brought out for visitors.²⁹ The *diphros* was made of wood, but Demosthenes³⁰ mentions a stool with silver feet, and Richter pictures some with elegantly carved legs; among the treasures of Athena were five *diphroi* with round feet and one with silver feet.³¹ In Homer the *diphros* often had a sheep-skin thrown over it; later a comfortable stool might have a cushion, and we find in Plato's *Republic* (I, 328 c) the phrase *καθῆστο . . . ἐπὶ τινος προσκεφαλαίου τε καὶ δίφρου*. The kind of stool which was carried on the head of a girl in the Panathenaic procession can be seen in the Parthenon frieze³² or in the terracotta figure in Richter,³³ and the four stools listed among the Parthenon treasures were probably thus carried.³⁴ There is also epigraphical mention of wicker stools with round cushions in a temple in Andania.³⁵

Stools shown in sculpture or vase-painting usually have four legs, but the fact that Eupolis³⁶ mentioned a *δίφρος Θετταλικὸς τετράπους* suggests that a three-legged was possible. A folding stool was called *δίφρος ὀκλαδῖος*; therefore the plain *diphros* may be thought of as always having fixed legs. The seat might be rectangular or round, and so might the legs, which were ordinarily made each of a single piece of wood fixed to the corners of the seat by nails or pegs. The *diphros* is often mentioned among the furniture of the bedroom,³⁷ and it can have the special sense of toilet stool.³⁸

Price. In our text of the Attic Stelai the price of a *diphros* is given once (II, 223) as 1 obol and again as .II (II, 227). A reconsideration of the photograph and the

²⁸ *δίφρος* = *sella curulis*, Polybios, VI, 53, 9; cf. Plutarch, *Caes.*, 66.

²⁹ See Gow, *ad Theokritos*, 14, 41; 15, 3.

³⁰ XXIV, *Against Timokrates*, 129.

³¹ *I.G.*, II², 1394, lines 13-14. *C.I.G.*, 3071, line 9, lists an ebony *diphros*.

³² Daremberg-Saglio, *Dictionnaire*, s.v. *Panathenaia*, fig. 5496.

³³ *Op. cit.*, fig. 105. The *διφροφόρος* is mentioned in Aristophanes, *Aves*, 1550 ff. and *Eccl.*, 730-744. See also the relief from Lokroi Epizephyrioi, *Ausonia*, III, 1908, p. 204, fig. 53.

³⁴ *I.G.*, I², 288, line 216.

³⁵ *I.G.*, V, 1, 1390, lines 23-24.

³⁶ *Frag.* 58; Kock, *C.A.F.*, I, p. 272. See also Pollux, X, 48.

³⁷ *Il.*, III, 424; Pollux, X, 47.

³⁸ Pollux, X, 45; Aristides, *Or.*, 49(25), 19; Plutarch, *Lyc.*, 20.

squeeze has made it clear that the price in Stele II, 223, should be read either as I or as I , since the angle of the break in the stone makes it impossible to determine whether or not there was a horizontal stroke. The reading of one drachma is more consistent with other furniture prices, and it is probable that the price in II, 227, was 1 drachma 2 obols.

4. *θρανίδιον* (I, 140).³⁹ Bench. This form, with a suffix in *-ιδιον*, has hitherto been found only in Pollux, X, 47 (= Aristophanes, frag. 399) in a section which lists various words for stools, including *diphroi*, *bathra*, and *skolythra*. The form is listed as a diminutive in Liddell-Scott-Jones; it may more accurately be grouped with instrument nouns and names of tools which are equivalent to their primitives.⁴⁰ As Blümner notes,⁴¹ the *thranos* is defined in the scholium to Aristophanes, *Equites*, 369, as the tanning-bench or the form on which the tanner stretches the hide. From *Plutus*, 545, it is clear that a *thranos* may be a wooden bench or seat. In Galen, 19, 104, it is explained as an excrement-stool. The word is defined by Saglio in *Dictionnaire*, IV, 1111b, as a stool or bench;⁴² and is grouped by Hug in *R.E.*, s.v. *Stuhl*, 399, with other words for stools.

Price. The price of our *thranidion* is clearly given as five drachmas.

5. *θρόνος* (II, 145, 236). Chair of honor. Like many of the other terms in our list, the word *thronos* underwent a change and broadening of meaning in its ancient usage. At the time of Homer it was the chair which belonged especially to gods and to princes⁴³ (although, as Buck⁴⁴ has pointed out, it was not absolutely restricted to use by such persons); yet in late Greek, *thronos* could mean any sort of seat or chair.⁴⁵ However, since most literary appearances of the word from the fifth and fourth centuries continue the old idea that the *thronos* is the seat of authority,⁴⁶ the obvious method of finding out what a *thronos* was is to collect the chairs which we find pictured as seats of gods and kings. This is what Richter has done,⁴⁷ and what Hug⁴⁸ has also

³⁹ See Buck, *Dictionary*, p. 481. For the derivation and cognates, see also Boisacq, *Dictionnaire*⁴, s.v. *θράνος*. The Homeric form *threnys* is used for a 'footstool.' Cf. Athenaeus, V, 192 e. In her treatment of the footstool (*Ancient Furniture*, pp. 73-75), Richter has taken *threnys* as the title word.

⁴⁰ So W. Petersen, *Gr. Dim. in -ιον*, p. 226.

⁴¹ *Technologie*, I², p. 266.

⁴² Cf. Hesychius, s.v.

⁴³ *Od.*, I, 130; VI, 308; VII, 95; X, 314; *Il.*, XXIV, 515, 522.

⁴⁴ *Op. cit.*, p. 481.

⁴⁵ For instance, Pollux, VII, 182. Hug, *R.E.*, s.v. *Stuhl*, assumes that this was true as early as the period of our inscription.

⁴⁶ For instance, Pindar, *Pyth.*, 4, 271; Euripides, *Heracl.*, 753; Aristophanes, *Ranae*, 765; Theokritos, 7, 93.

⁴⁷ *Op. cit.*, pp. 3-29. It may be noted that Seltman (*J.H.S.*, LXVII, 1947, pp. 22-30) in publishing two Athenian marble thrones, one of Hellenistic date and one of Roman, has collected examples of chairs represented on coins.

done, leaning more heavily on literary evidence and using fewer graphic illustrations. Both of these writers distinguish four major types of thronoi. First, and perhaps earliest, a style which Richter considers orientalizing, with low curving back, often ending in a decorative finial, and distinguished by carved legs, usually slanting outwards, terminating in animal feet. This type sometimes has an arm rest; it may have a stretcher beneath the seat, and it often shows a figure standing as a brace between legs and seat.⁴⁹ This chair we have absolute permission to call a thronos, for on an amphora in Paris, where the birth of Athena is shown, Zeus sits on such a seat, under which is the label *Θρόνος*.⁵⁰ The second type of seat for gods and princes distinguished by Richter and Hug is rectangular in shape, having straight rectangular legs which are often highly decorated and may be carved out in the same manner as the legs of beds. This chair may have a low or high back, or no back at all; it may have arms or not. In early examples it often shows animal or human motifs continuing on the back or in the figures in the space beneath the seat, but by the later fifth century the design had become almost purely architectural. The third type is a chair with cylindrical turned legs, with or without arms, which, like the rectangular-legged seat, may show animal motifs in the early fifth century, but soon is purified of these only to become excessively ornate in the fourth century. The final type of the thronos is the typical seat of a terracotta goddess; a variation of it can be seen in the stone seats of honor in the theatres. This thronos was made not with four legs, but with a solid box-like base which extended upwards for the back and might continue around the sides to create arms. According to Miss Richter,⁵¹ the most popular of these four types in the late fifth century was the second, the throne with carved rectangular legs.

The thronos was also the seat of an authority which was neither political nor divine but pedagogic. Plato, in the *Protagoras* (315 c), places Hippias on a thronos and his companions upon surrounding bathra. Plutarch speaks of the sophist's loss of dignity when he gets up from his throne and puts aside his books,⁵² and Philostratos frequently mentions the thronos as the seat of the philosopher.⁵³ This usage may be almost entirely post-Platonic, however, for in vase-paintings of school-room scenes from the fifth century there are teachers seated on folding stools, on plain diphroi, and on the curved-backed chair which Richter calls a klismos, but not so far as I know upon any of the types of thronoi listed above.⁵⁴ It was probably following this tra-

⁴⁸ *R.E.*, s.v. *Stuhl*.

⁴⁹ A variation of this first type, which Richter does not mention, can be seen in *Ausonia*, III, 1908, p. 175, fig. 29; here the base of the throne is a box set on animal feet.

⁵⁰ *Mon. Ined.*, VI, pl. LVI, 3; Richter, *op. cit.*, p. 8.

⁵¹ *Op. cit.*, p. 25.

⁵² *Moralia*, 43 F, *De recte ratione audiendi*.

⁵³ *Vit. Soph.*, II, 588, 591, 613.

⁵⁴ See Daremberg-Saglio, *Dictionnaire*, II, figs. 2599-2603.

dition of the philosopher's chair that the early Christians called the chair of a bishop a *thronos*.⁵⁵

The use of the term *thronos* in other inscriptions does not help to determine its precise meaning in the Alkibiades list, for the word does not often occur, and when it does it refers to pieces of votive furniture which are neither described nor evaluated. Most probably the *thronoi* which were set up in the temples were of Miss Richter's type 4, a type very unlikely to appear in a list of ordinary household furniture because of its extra weight. A group of twelve *thronoi* is repeatedly mentioned in the accounts of the treasurers of Athena; in the Delian inscriptions a *thronos* is occasionally mentioned, apparently as the seat for a figure of a god which was held in place by a cord or chain, but the chair is not given any specific character, and the term seems to be used interchangeably with *klismos*.⁵⁶

Hug believed that the *thronos* was not often a piece of furniture for ordinary household use,⁵⁷ but our text seems to show that it was common enough at the end of the fifth century. Richter gives one representation of a *thronos* in domestic surroundings,⁵⁸ but it seems at least likely that the woman who is here seated upon an ornate throne with rectangular legs is Phaedra, so that we have a princely mythological scene and not one from everyday life. However, in an archaic funerary plaque from Berlin a group of women are shown in their quarters, some sitting on *thronoi* of Richter's type 1, and some on animal-legged folding stools.⁵⁹ A fourth-century *lekanis*, or covered bowl, from Kertch, apparently intended especially for women's use, shows a group of women and a bridegroom gathered around a herm in the closed courtyard of a house. One lady, who is regarded as the bride's mother, sits on a throne of type 2, with a high back, arms, and rectangular, cut-out legs.⁶⁰ It may be that in ordinary use the *thronos* was particularly associated with women, for Pollux lists it among τὰ τῷ κοιῶνι παρακείμενα (X, 47). Athenaeus quotes a phrase of Kritias about the Thesalian *thronos*, which was much admired, emphasizing the comfort rather than the prestige of the chair.⁶¹

Probably the *thronoi* of the Attic Stelai were something like the chair shown on the bowl from Kertch. It is doubtful that they were inlaid with metal or ivory, for this would have been specified, but they may have been highly decorated and elaborately

⁵⁵ Eusebius, *Hist. Eccl.*, VII, 30.

⁵⁶ *I.G.*, XI, 161 B, line 22 and note; cf. 287 B, line 20.

⁵⁷ *Op. cit.*, 415: "In den Darstellungen des täglichen Lebens begegnet man dem Thronsessel als Hausmöbel sehr selten."

⁵⁸ *Op. cit.*, fig. 51.

⁵⁹ Darenberg-Saglio, *Dictionnaire*, II, fig. 2597.

⁶⁰ Furtwängler-Reichhold, *Griechische Vasenmalerei*, Ser. 2, pp. 34 ff. and pl. 68 (= K. Schefold, *Untersuchungen zu den Kertschen Vasen*, Berlin and Leipzig, 1934, no. 10; and *Kertscher Vasen*, Berlin, 1930, pls. 13 and 14).

⁶¹ I, 28 b: Θεσσαλικὸς δὲ θρόνος, γυνὼν τρυφερωτάτῃ ἔδρα.

carved. One last problem is whether or not the item *thronos* included a footstool. Certainly a low stool was a regular adjunct to the *thronos*; it is frequently mentioned⁶² and pictured.⁶³ Athenaeus (V, 192 e) describes the *thronos* as *ἐλευθέριος καθέδρα σὺν ὑποποδιῶ*, and Hug defines it as "Lehn-Stuhl mit zugehörigem Schemel, *θρήνυς*."⁶⁴ Since we have no *θρήνυς* in our list it might be tempting to suppose that a footstool accompanied each *thronos*; however, when so much of the inscription is lost, it is certainly unwise to argue from the absence of an item, and it is the practice of the list to indicate each separate piece. Either these particular *thronoi* did not have footstools, or the stools were mentioned on parts of the stone which can no longer be read.

Price. Neither price nor sales tax has been preserved for any of the *thronoi*. An Egyptian price of 20 drachmas for a throne for a festival is noted by Johnson, "Roman Egypt," *Economic Survey*, II, p. 473.

6. *πρόσκλιντρον* (VI, 169). Chair with a back. This word is otherwise known only from the lexicons; we have found no examples of its usage at any time before the Byzantine period. And the lexicons are neither consistent nor very clear in their definitions. According to *Et. Mag.* the *prosklintron* is the same as the *proskliton*; then it is added that a *klintron* is a *thronos* which has a *prosklintron*, which would give us the meaning 'chair-back.' However, in the definition of *κλήτος* (519, 42) *proskliton* and *katakliton* are equated and explained as parts of the house; this interpretation is repeated under *στοά* (728, 12), where the porch is defined as a *proskliton*.⁶⁵ So from *Et. Mag.* two meanings emerge: 'chair-back' and 'porch.' Suidas, however, contains a definition of *proskliton* as *ἐν ᾧ ἀκουμβίζομεν*, and the *Thesaurus Graecae Linguae* follows this interpretation with: *Id cui acclinare nos possumus*.

Since a removable chair-back is by no means so easy to conceive of as a removable *epiklintron*, probably we must see in our item some kind of chair having a back. How it was different from the *anaklisis* cannot be decided without more evidence.

No price remains in our list.

CHESTS AND BOXES

1. *κιβωτός, κιβώτιον* (I, 215, 216, 227, 228; V, 16). Chest, box. There is a chapter on the chest in Richter's *Ancient Furniture*, pp. 89-99, a brief article by Reincke, *R.E.*, s.v. *Truhen*, and another by Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Arca*. G. Davidson, *Corinth*, XII, pp. 131-136, has a section on boxes and chests, but the finds she reports are of hardware and not of chests themselves, which were

⁶² For example, *Od.*, VIII, 422; XVII, 409; XIX, 57; *Il.*, XIV, 240; XVIII, 390.

⁶³ Of 55 examples in Richter, *op. cit.*, of types 1, 2, and 3 of the *thronos* only 15 are without footstools, and these tend to be from the archaic period or the early fifth century.

⁶⁴ *Op. cit.*, p. 415.

⁶⁵ Cf. the English 'lean-to' for a shed attached to a major building.

usually made of wood. On Delian chests, see Deonna, *Délos*, XVIII, pp. 235 ff. For representations of chests in vase-paintings, see the red-figured pyxis published by C. Clairmont in *A.J.A.*, LVII, 1953, pp. 92-94 with references (especially W. von Massow, *Ath. Mitt.*, XLI, 1916, pp. 3-10).

These writers have assumed that the *kibotos* of the Greeks was a box, large or small, which had a hinged lid that might be raised, or closed and made fast; this was what the Romans called the *arca*. A second sort of storage box was presumably introduced later by the Romans; it was the *armarium* (*πυργίσκος* in late Greek), or upright cupboard or cabinet, having doors placed vertically at the front. A fine large cupboard of this sort is shown in a fresco from Herculaneum in the National Museum at Naples,⁶⁶ but Miss Richter has found no evidence of the use of this sort of cabinet by the Greeks, and she concludes, "Here . . . the Romans made an important original contribution . . ." ⁶⁷

However, there is a 1940 dissertation from Würzburg, by E. G. Budde, *Armarium und κιβωτός*, which would contest the purely Roman character of the *armarium*; one of its contentions is that the cupboard or cabinet appeared in Greece as early as the fifth century B.C. As literary evidence for Greek cupboards with vertical doors Budde cites Plato's *Symposium*, 215, which describes busts of Silenos: "when their two halves are pulled open, they are found to contain images of gods."⁶⁸ Actually there is nothing here to specify doors,⁶⁹ and Budde himself, following Panofka, refers us to certain German peasant wood carvings, the "Nürnberger Kapseln," for comparison, although here the upper half of the body was removed and the lower half split to reveal a scene inside.⁷⁰ The silenoi figure may indeed have opened in this way, but it will take much more than this to establish the existence in fifth-century Greece of an upright cupboard.

The kibotoi listed in our inscription are of primary importance to Budde's argument, for he assumes that they could not be described as *dithyros* (I, 227), *tetrathyros* (I, 228), and *thyridotos* (V, 16), unless the 'doors' were set in a vertical plane. Nevertheless he rejects, for reasons which are not altogether clear, the interpretation of Dörpfeld⁷¹ which would make the kibotoi standing in the arsenal of Philo open with doors at the front or sides rather than by lids at the top. Indeed, Dörpfeld's suggestion is not compelling; it seems more likely that since the chests of Philo were made to hold sails they would be similar to other Greek chests for storing clothes.

⁶⁶ Richter, *op. cit.*, fig. 343; cf. fig. 340.

⁶⁷ *Ibid.*, p. 145.

⁶⁸ Loeb translation by W. R. M. Lamb.

⁶⁹ He might perhaps have cited the bronze horse of *Republic*, 359 d, which was said to have "little doors," through which the body inside could be seen, since chests and coffins were often made on the same plan.

⁷⁰ *Arch. Anz.*, XLVIII, 1933, p. 390, fig. 1.

⁷¹ *Ath. Mitt.*, VIII, 1883, p. 164.

They would be large and low, for the sails could be folded one directly on top of another, and shelves, which would be necessary for a high cupboard with front openings, would only be a useless expense. If the tops of these chests were open their contents would be visible for a passing inspection, as the inscription provides.⁷² It may be noted that Marstrand⁷³ has reconstructed the kibotoi of the armory with open grillwork panels set in their sides; there is no evidence for such a detail in the words of the inscription, but openings of some sort would be effective in discouraging mildew in the sails, and Marstrand's notion is interesting in connection with the chest of our list which is called *thyridotos*, 'having apertures.'

At any rate, Budde does not cite the chests of Philo as examples of his Greek *armaria*. He admits that representations of cupboards are extremely rare in Greek art but he believes that he has found some in the fifth-century reliefs from Lokroi Epizephyrioi.⁷⁴ In these scenes there is frequently shown what seems to be a chest placed on rather long legs so that it attains the height of a table. These are highly decorated pieces, and on the vertical face which is shown in full there are usually two panels set off in the carving; these Budde supposes to be the doors of the cabinet. It is easy to appreciate his interpretation of the function of the panels, and yet no one of the many reliefs offers clinching evidence. The panels are never shown ajar or being opened; never can we see anything which might have been meant to suggest hinge, knob or fastening, although this is the sort of detail which Greek artists were usually careful to reproduce. Sometimes the raised outline of the panel is so continued by the decorative scheme that a break in it would be necessary if the panel were to open as a door, and yet the border is shown as perfectly continuous.⁷⁵ And we know that some of the panels certainly did not open, for they are shown on a table with a very deep facing around the top,⁷⁶ and again, and this is a strong point against Budde, the same sort of panel is shown on the side of a chest, the top of which a woman is in the act of raising.⁷⁷ One fact which Budde might note but does not is that the tops of these small chests or tables are often laden with objects; however, the presence of these objects discourages the idea of a top opening only if we must believe that the chests were frequently opened; and since these particular reliefs show cult scenes, it may be supposed that the chests contained sacred objects which were not often brought out. Two of the Locrian chests had on their paired front panels representations of a pair of tiny, double-leaved doors, complete with lintels and consoles.⁷⁸ These were thought

⁷² *I.G.*, II², 1668, lines 85 ff.

⁷³ *Arsenalet i Piraeus og Oldtidens byggregler*, Kopenhagen, 1922, pp. 116 ff.

⁷⁴ *Ausonia*, III, 1908, pp. 136 ff.

⁷⁵ *Ibid.*, fig. 47.

⁷⁶ *Ibid.*, fig. 48; an altar, according to Quagliati.

⁷⁷ *Ibid.*, fig. 63. See also Clairmont, *op. cit.*, pl. 51, fig. 11.

⁷⁸ *Ibid.*, figs. 77 and 78; cf. Studniczka, *Abh. der königl. sächs. Gesellschaft der Wissensch., Phil.-hist. Kl.*, XXX, Leipzig, 1913, p. 165, figs. 48, 49. The fact that a pot might be placed on

by Quagliati to be merely decorative carving,⁷⁹ but Budde and Studniczka have taken them to be the functioning doors to the chest, and Studniczka suggests that this is the *kibotos dithyros* of our inscription.⁸⁰ The little doors, if they opened, would offer two very restricted and awkward entrances, through which only very small objects could be introduced, although the space within was quite large.⁸¹ Yet, whether or not they opened, they do constitute a representation from the fifth century B.C. of a door placed vertically in the face of a piece of furniture not unlike the usual chests, which sometimes also stood on legs. The question is: does such a cupboard, though only so doubtfully established, suit the terms of our inscription better than the well authenticated chest?

First it must be established that the mere use of the term 'door' does not, as Budde assumes, necessitate a vertical plane. A *thyra* was primarily an entrance, and the fact that it could be thought of in a horizontal plane is made clear by the term used for a trap-door, *thyra katapakte* (Herodotos, V, 16). It seems reasonable to assume that the chest which is described as *thyridotos* (V, 16) had apertures of the sort supposed by Marstrand. The same sort of open grillwork panel can be seen on a chest found in a Euboean chamber grave, a chest which incidentally shows a plain panel in its own front surface which clearly did not open.⁸² A *kibotos* of this sort would open in the usual way, with a lid at the top.

The two-doored *kibotos* (I, 227) might easily have been one of the known types of chest. In the case of a large chest, it would be natural to divide the lid, which otherwise might be too heavy to lift easily, and to compartmentalize the interior; this would provide the usefulness of two chests, while the cost would hardly be increased. Since these chests are nearly always shown in profile, the possibility of a split lid can neither be confirmed nor ruled out by a study of vase-paintings and reliefs. Miss Richter has found a variation in the coffin-chest, with gabled top, which would also lend itself to a two-doored construction.⁸³

The four-doored *kibotos* is much harder to envisage. The only other ancient usages of the term *tetrathyros* are by Aristotle, *H.A.*, 628a, where the meaning is

top of a *kibotos* which opened by a lid is demonstrated by Furtwängler-Reichhold, *Griechische Vasenmalerei*, pl. 57, 3.

⁷⁹ *Ausonia*, III, 1908, p. 227. W. von Massow, *op. cit.*, p. 10, agrees, yet sees these false doors as pointing toward actual vertical doors in the *kibotai* of the Attic Stelai. Note that Theophrastos, *H.P.*, V, 7, 6, mentions the ornamental work which was frequently glued to the surface of the chests.

⁸⁰ *Op. cit.*, p. 165. It should be noted that Studniczka nevertheless treats the pieces as examples of the *kuliouchion*, 'buffet' or 'side table,' and refers to Brunn, *Monum. Annali Bull. d. Inst.*, 1856, p. 114, where these same pieces of furniture are called cult tables.

⁸¹ It should be remembered that Miss Richter was not unaware of the Locrian reliefs when she reached her conclusion that the cupboard with vertical doors in its face was an invention of the Romans.

⁸² Vollmoeller, *Ath. Mitt.*, XXVI, 1901, pl. XIII.

⁸³ *Op. cit.*, pp. 94 ff., figs. 232, 234.

'four-chambered,' rather than 'four-doored,' and Kallixeinos, *ap.* Athenaeus, V, 205b, where a single doorway in a ship's hold apparently had four leaves. τετ[ράθυρος] has been restored in the text of Stele I, line 228, by all editors; the only other possibility would seem to be *tetrapous* (as *diphros tetrapous*, Eupolis, 58: Kock, *C.A.F.*, I, p. 272; *Pap. Oxy.*, 646; Epicharmos, 149), that is, a chest standing on four legs instead of resting directly on the ground or on a low stand. This alternative restoration is not very attractive since by the late fifth century nearly all chests stood on legs; Richter shows only one which does not.⁸⁴ Either the chest or the coffin-chest might well have been divided into four compartments, each with its lid, and this would be our preference, although admittedly we have no evidence for such pieces.⁸⁵ In the same way, a cupboard of the Locrian type could be broadened so that it would offer four doors in a row, or it could be heightened by the addition of another two-compartment tier. This last possibility seems the least likely, since the only representations we have of a possible Greek cupboard show a piece of furniture which was clearly used as much for a low table as it was for a chest, and the pieces may actually have been only tables, as was suggested by Brunn.⁸⁶ We cannot then assert that this kibotos tetrathyros was definitely either chest or cupboard; certainly Budde cannot use it as a proof of the early existence of the cupboard form.

Whatever their shape, the kibotoi were made of wood⁸⁷ with lids (or doors) attached by metal hinges.⁸⁸ From vase-paintings it can be seen that the usual method of closing was with thongs bound around two knobs, one on the body of the chest and one on the lid.⁸⁹ A kibotos could be even more firmly sealed if necessary, for in *I.G.*, II², 1469, line 102, there are chests which are specified as *sesemasmene* and *asemantos*. The kibotos could be used for storing clothes,⁹⁰ or money,⁹¹ or scrolls and documents,⁹² or miscellaneous objects.⁹³

⁸⁴ *Op. cit.*, fig. 224.

⁸⁵ In *Insc. Délos*, 442 B, line 25, there is a list of vessels from the first, second, and third *rhymoi* of a kibotos. It has been generally thought (Homolle, *B.C.H.*, VI, 1882, p. 90, note 3; Holleaux, *B.C.H.*, XXXI, 1907, pp. 53-56) that in the inventories the word *rhymos* meant 'group' or 'class,' and it might then seem possible that in this Delian chest there were actual compartments, conceivably with separate lids. But D. B. Thompson (*Hesperia*, XIII, 1944, p. 186) has shown that in some Athenian records the word means the 'yard' or lever (*statera*) of the weighing instrument. We must then take our Delian word to refer to 'weighing-lots.' In connection with the word *rhymos*, it may be noted that in the inventory *I.G.*, II², 1443, the numerals modifying the word run as high as twenty-two (lines 12-71).

⁸⁶ *Loc. cit.* They are called tables also by the Brit. Mus., *Greek and Roman Life*, 2nd ed., London, 1920, p. 41, fig. 31.

⁸⁷ On occasion a kibotos might be of ivory or bronze, or even papyrus (*Insc. Délos*, 442 B, line 214; 443, line 138), but these materials would be specified in a list such as ours.

⁸⁸ Deonna, *Délos*, XVIII, pp. 242-244; Davidson, *loc. cit.*, and p. 129 for bone hinges and knobs.

⁸⁹ Richter, *op. cit.*, figs. 236-241.

⁹⁰ Aristophanes, *Vespae*, 1056; Athenaeus, III, 84 a; *I.G.*, I², 386, line 22; XI, 2, 287 A, line 49.

⁹¹ Lysias, XII, *Against Eratosthenes*, 10; *I.G.*, II², 1388, line 61.

The diminutive *kibotion* has been grouped with its primitive *kibotos*. W. Petersen⁹⁴ has shown that the diminutive may mean 'a small box,'⁹⁵ or it may mean 'that which is like a box,'⁹⁶ or it may simply mean 'box,' regardless of size.⁹⁷ The word is frequently used in the Delian inscriptions, where it probably did refer to a fairly small box, since it was nearly always used as a place to store gold ornaments, crowns and rings, or glass cups.⁹⁸ In domestic use the *kibotion* would contain jewelry, money, or utensils; Pollux (X, 61) mentions *kibotia grammatophora*, which held the papyrus rolls of a teacher. Like the ordinary *kibotos*, the smaller box was usually of wood but might also be of ivory or metal.⁹⁹ These boxes unquestionably opened at the top, and the box described in Stele I, line 215, as *πλατύ*, 'broad,' probably looked something like Miss Richter's fig. 240.

Price. The price of the *kibotos thyridotos* (V, 16) must be restored as at least 21 drachmas, the highest price we have found for any piece of furniture; only the folding doors were more expensive at 23 drachmas 1 obol. This chest must have been quite large (in more than one legend the *kibotos* was big enough for a man to hide in), but the price may also be partially explained by the fact that the grillwork of carved wood or metal would add considerably to the value of the chest. It is reasonable to suppose that the other chests sold at somewhat lower prices. In the records of the temple at Eleusis for 329/8 B.C. a *kibotos* is valued at 20 drachmas.¹⁰⁰ One other not very indicative comparative price has been found: in the Delian accounts of 250 B.C. a workman was paid 5 drachmas (a high wage) for the repair of a *kibotos*.¹⁰¹

2. *κοίτη* (I, 211, 213). Chest. As an article of furniture, *koite* has two meanings: 'couch' and 'chest.' The former meaning is well attested; see *Thesaurus Graecae Linguae*, s.v. *κοίτη* and Buck, *Dictionary*, p. 480. Most of the passages cited in the *Thesaurus* and in Liddell-Scott-Jones are from lyric poetry, and the word has been regarded as poetical for 'couch' by Ransom¹⁰² and Rodenwaldt.¹⁰³

Hesychius, however, has defined the *koite* as a chest in which food was carried.

⁹² *I.G.*, II², 1455, line 16; Aristophanes, *Equites*, 1000; in papyri the term is used to mean 'archives'; *R.E.*, s.v. *Truhe*, 704.

⁹³ Pausanias, X, 28, 3; *I.G.*, II², 1388, lines 73 ff.

⁹⁴ *Gr. Dim. in -ιον*, pp. 83, 147.

⁹⁵ *Ibid.*, p. 83.

⁹⁶ *Ibid.*, p. 112.

⁹⁷ *Ibid.*, p. 98. We found no reference to *kibotion* in J. Friedrich, *Deminutivbildungen mit nicht deminutiver Bedeutung*, Leipzig, 1916, but it should be noted that the work is not provided with an index.

⁹⁸ Deonna, *Délos*, XVIII, p. 235.

⁹⁹ *I.G.*, I², 314, col. I, line 25; II², 1456, line 34.

¹⁰⁰ *I.G.*, II², 1672, line 192.

¹⁰¹ *I.G.*, XI, 2, 287 A, line 49.

¹⁰² *Op. cit.*, p. 109.

¹⁰³ *R.E.*, s.v. *Kline*, 847.

He also equates it with *kiste*, which he defines as a vessel (*angeion*) in which food or clothing was placed. In Plutarch, *Phocion*, 28, reference is made to fillets which entwined the mystic koitai at the time of the celebration of the mysteries, and in this context the word has been studied by Lenormant in Daremberg-Saglio, *Dictionnaire*, s.v. *Cista*, 1205. Ancient references have been collected by E. G. Budde, *op. cit.*, p. 5. Pollux, X, 91, quotes fragments from Eupolis (frag. 76: Kock, *C.A.F.*, I, p. 276) and Pherekrates (frag. 122: Kock, *C.A.F.*, I, p. 180) to show that the koite was used for carrying food (*ὀψοφόρος*). In VI, 10, he defines the koite as the chest in which bed-clothing was stored.

In the Parthenon records beginning in 434/3 B.C., a koite of gilded wood is reported.¹⁰⁴ This item continues to be mentioned at least through the accounts of 368/7 B.C. (*I.G.*, II², 1425, lines 271-2). In one record of the treasurers of Athena, dated shortly after 385/4 B.C., thirty bronze koitai are described as 'empty,' one without a lid (*epithema*).¹⁰⁵ Three lines above a box for alabaster ornaments was inventoried. Clearly the reference in this context and with this description is not to a bed. In *I.G.*, II², 1485, line 58, the koite was also of gilded wood.

Liddell-Scott-Jones has defined *koite* in our inscription as 'bedstead.' But earlier Wilhelm had defended the meaning 'chest,'¹⁰⁶ in my opinion correctly. The word is inscribed only two lines from *kibotion*, 'chest,' and is preceded by articles of clothing. The definition of Pollux in VI, 10, would be most suitable for our entry. Moreover, Pollux, in VII, 159, lists *koite* with *kibotos*, *kibotion*, and other words for 'chest.'

Price. The sales-tax for our koite was one obol, if fragments *b* and *d* were given their correct positions as the writer has posited in Part I, p. 248. This means that the sales-price was some figure less than 5 drachmas. It seems reasonable to assume that our chest was of unadorned wood.

COUCHES AND BEDS

Our stele preserves the following words for 'beds' or 'places for lying': *κλίνη*, *κλινίδιον*, *κλιντήρ*, *σκήμπους* and *χάμευνα*. There is also listed an elbow rest for a couch, *ἐπίκλιντρον*.¹⁰⁷ The most detailed study of the couch or bed is that of C. L. Ransom (*Couches and Beds*), who devotes Chapter II to a study of the construction of the ancient couch from the modest wooden type to the most elaborate. Richter,¹⁰⁸ who uses *kline* as the index word, divides the forms of the couch into three groups according to the types of legs (animal-footed, rectangular, and turned). The main article in Daremberg-Saglio is that of Girard, s.v. *Lectus*; in *R.E.* those of Mau s.v. *Betten* and

¹⁰⁴ *I.G.*, I², 276, line 10, etc.

¹⁰⁵ *I.G.*, II², 1408, lines 14-15. Similarly, *I.G.*, II², 120, lines 37 ff. (362/1 B.C.).

¹⁰⁶ *Jahreshefte*, VI, 1903, p. 240. Cf. Ransom, *op. cit.*, p. 110, note 3.

¹⁰⁷ For *κάλως*, which in our list refers to the strap of the bedstead, see *sub* Tools.

¹⁰⁸ *Ancient Furniture*, pp. 54-71.

of Rodenwaldt *s.v.* *Kline*. Delian beds are discussed by Deonna in *Délos*, XVIII, pp. 1-4. A convenient list of words connected with the couch is given in Reincke's 1935 article *s.v.* *Möbel* in *R.E.*, Suppl. 6, 508. More recently, Miss D. K. Hill has published a bronze couch of about the first century B.C. in *Journal of Walters Art Gallery*, XV-XVI, 1952-3, pp. 49-61. References to preserved copies of ancient couches are usually made by their numbers in the list of Greifenhagen (*Röm. Mitt.*, XLV, 1930, pp. 137-146).

The couch was a very common article of furniture. Robinson surmises that a dining room with three couches (*triklinon*) was most common,¹⁰⁹ although his reference (Athenaeus I, 23 e) hardly seems to confirm this. In the case of the men's rooms, Robinson and Graham have reported: "Of the twenty-five completely excavated androns at Olynthus . . . fifteen could have accommodated five couches 2.00 to 2.25 m. long."¹¹⁰ Studniczka reconstructs nine couches in rooms of a house in Megara.¹¹¹ For an interesting list of the known numeral compounds with -κλινος see Buck and Petersen, *Reverse Index*, p. 273.¹¹²

1. κλίνη (I, 229, 233; II, 7, 241, 244, 245; III, 6 [see below, p. 228]; VI, 40, 41). Couch, bed. For the derivation of the word (κλίνομαι, 'recline, lie'), see Boisacq, *Dictionnaire*,⁴ p. 470; and Buck, *Dictionary*, p. 480. The earliest occurrences of this post-Homeric word are in Herodotos (VI, 139; IX, 16) and *I.G.*, XII, 5, 593, line 6.¹¹³

The *kline* was a couch for sleeping, banquets and funerals. One could lie upon it, use it at table, or sit upon it.¹¹⁴ The dimensions must have varied considerably; see *B.C.H.*, X, 1886, p. 467, line 143; and *I.G.*, II², 1638, line 68. Repairs of klinai are frequently mentioned in the Delian inventories.¹¹⁵

Prices. So far as the writer knows, the prices of couches, as of those of other articles of furniture, have never been collected. Some prices are preserved from ancient sources. In *I.G.*, XI, 2, 287, A, line 115 (250 B.C.), the price of making 14 beds for the sanctuary of Zeus Kynthios on Delos is given as 275 drachmas, or slightly more than 19.6 drachmas apiece.¹¹⁶ In *I.G.*, IV², 114, lines 20-24 (*ca.* 300

¹⁰⁹ *Olynthus*, XII, p. 350. As Robinson and Graham (*Olynthus*, VIII, p. 173) note, "in later times *triclinium* became the accepted term for a dining room among the Romans."

¹¹⁰ *Olynthus*, VIII, p. 173.

¹¹¹ *Op. cit.*, p. 142.

¹¹² The ἡμίκλινον, or half-sized couch, of *I.G.*, XI, 2, 147 B, line 14, seems to have received no attention in the literature dealing with furniture.

¹¹³ Cf. Buck and Petersen, *Reverse Index*, p. 292.

¹¹⁴ See the references in the *Thesaurus Graecae Linguae*, *s.v.*

¹¹⁵ *I.G.*, XI, 144, A, line 65; 199, A, line 27; 287, A, line 70 (this is for fixing the ropes which supported the mattress); *Insc. Délos*, 443, Bb, lines 141, 162.

¹¹⁶ I would assume that these were beds of metal construction, especially in view of Pliny's (*H.N.*, XXXIV, 4, 9) statement that the bronze of Delos was used for triclinii. When klinai were

B.C.), the price for making 50 klinai for the inn at Epidaurus is given as 12 drachmas apiece.

The evidence for the prices of klinai in our document is rather extensive. There are two entries for Milesian-made klinai in I, 229 and II, 244. In the former, eleven klinai were recorded as being sold at 90 drachmas, or 8-2/11 drachmas apiece. In the latter, one kline sold at 7 drachmas 3 obols. The unmodified entry *kline* occurs in II, 241; the sales price was 6 drachmas 4 obols. The author now believes that κλί[νε] is to be restored in III, 6, where the sales price was 8 drachmas 1 obol (see below, p. 229). A broken kline, as recorded in II, 6-7, was sold for 3 drachmas 1 obol. There remains for consideration the entry of seven klinai in II, 245. The sales-price has been read as ..ΔΔ†. One would expect the price of each of these beds to be somewhat less than that for Milesian-made klinai and roughly the same as the entry in II, 241. The most likely restoration, then, would be the figures for 42 drachmas, or an average of six drachmas per kline. The sales tax must then be restored as [II]I. Reexamination of this fragment shows that the one preserved obol of the sales tax was inscribed beneath the third obol of line 244 above; so there is room for the restoration of two obol signs to the left. The average price, then, of the Milesian-made bed is *ca.* 8 drachmas apiece; of the simple kline, *ca.* 6 drachmas.¹¹⁷

Milesian beds. The eleven klinai listed in Stele I, 229, and the one kline in I, 233, are specified as Μιλησιουργεῖς. Athenaeus in cataloguing the special products of each city cites a fragment of the fifth-century writer Kritias in which the *lechoi* (the Homeric and poetic word for couch) of Miletos and of Chios are singled out for mention.¹¹⁸ Elsewhere Athenaeus, in discussing etymologies in -ουργεῖς, quotes another fragment from a prose work of Kritias which mentioned Milesian-made and Chian-made klinai.¹¹⁹ In the Parthenon inventory records, Milesian-made klinai appear in the accounts for the year 434/3 and occur regularly thereafter.¹²⁰

Miss Ransom has examined the view of Rayet, concurred in by Benndorf and Petersen, that the Milesian couch was a specific type having rectangular legs.¹²¹ This view rests on the hypothesis that the couch with rectangular legs and incisions was

dedicated to Hera after the siege of Plataea, Thucydides (III, 68, 3) tells us that they were made of bronze and iron. Similarly, beds inventoried in the Parthenon accounts contained feet overlaid with silver (*I.G.*, I², 276, lines 16-17, etc.).

¹¹⁷ See Johnson, "Roman Egypt," *Economic Survey*, II, p. 473, where a triclinium and four cushions are priced at 500 drachmas.

¹¹⁸ Athenaeus I, 28 b.

¹¹⁹ XI, 486 e.

¹²⁰ *I.G.*, I², 276, line 14. In the accounts of the Treasurers of Athena for the year 368/7, reference to the Milesian beds still appears (see *I.G.*, II², 1425, lines 217 and 277, and Kirchner's commentary *ad loc.*).

¹²¹ *Couches and Beds*, p. 54, note 5. The bibliography on this subject is given by Rodenwaldt (*R.E.*, s.v. *Kline*, 848), who concludes that up to date no results have been certain. For the application of the word *milesiourges* to metal work, see Déonna, *La vie privée*, p. 177.

distinguished in the fifth century for its elegance and richness and for the character of its design which suggests Asiatic origin. She concludes that Rayet's hypothesis is plausible but not indisputable. Richter, however, who does not refer to a Milesian type, regards the rectangular legs as "a purely Greek creation" and fails to note any Asiatic influence.¹²² She notes many representations on Athenian vases.

One Milesian kline is designated as ἀμφικέφαλος. A word of very similar spelling, ἀμφικνέφαλλος, occurs in Pollux, X, 36. If correct, it would mean 'with pillows at both ends.' This is a *hapax*, however, and it would seem likely that it is an error for our word. The forms are discussed by Wilhelm, *Jahreshefte*, VI, 1903, p. 237; and by Rodenwaldt in *R.E.*, s.v. *Kline*, 849. Hesychius, the *Et. Mag.*, and Photius define *amphikephalos*, which in medieval writers means 'two-headed,' as a bed which has an *anaklintron* or *anaklisis* at either end. Miss Ransom regards her figures 11 and 12 and plate I as illustrations of this type of kline.

2. κλινίδιον (III, 7). Diminutive of κλίνη. The first four letters of this word in III, 7, are wholly preserved; the fifth only partially so. The base of a vertical stroke may be seen in the photograph in *Hesperia*, XXII, plate 74, with no horizontal stroke extending from it. Since the word could not be read as *kline*, the restoration κλινί[διον] was suggested in Part I. In the line above only three letters are preserved, and the restoration *kli[nidion]* was also suggested there. But there is a difference in price of 2 drachmas and to explain this difference the writer would now prefer the restoration κλί[νε] in the upper line, with the required diminutive form for the lower price.

The word is regarded by W. Petersen as having the same meaning as the primitive *kline* and *klinis*,¹²³ and Ransom groups it with possible colloquial words for 'bed.' The word is not listed in J. Friedrich's Leipzig dissertation, *Deminutivbildung mit nicht deminutiver Bedeutung*, and its occurrence in our list would speak for some distinction from *kline*, which would reasonably seem to be one of size.¹²⁴

Price. The price of the klinidion in III, 7, is given as 6 drachmas 1 obol.

3. κλιντήρ (II, 150). Type of couch or reclining chair. In Daremberg-Saglio, *Dictionnaire*, s.v. *Cathedra*, Saglio identifies *klinter* with *klismos* and defines it as a seat with rounded and inclined back in which one could half-recline. He gives no ancient references to support this definition. Later (s.v. *Scamnum*, p. 1111b) the same writer defines the *klinter* as a seat less elevated than a *thronos*. Lécivain (s.v. *Matrimonium*) defines the word as a bed on which the bride reclined at the nuptial feast. In the *R.E.*, Hug regards the *klinter* as a variety of *klisia* arranged for

¹²² *Op. cit.*, p. 58.

¹²³ *Op. cit.*, pp. 222, 226.

¹²⁴ Suidas glosses the form as a diminutive, and Pollux (VI, 9) lists it separately from *kline* and *klinis*.

slumbering,¹²⁵ but Rodenwaldt follows Ransom in defining it as a poetical term for couch.¹²⁶ Finally, Studniczka, referring to Lucian, *Symp.*, 8, describes it as "eine lange einheitliche Bank."

In spite of so many varied definitions, there are relatively few literary references to the klintēr. The word is applied to Penelope's bed in *Od.*, XVIII, 190, and to Simaetha's in Theokritos, 2, 86 and 113. In both passages reference is made to sleeping, in the latter for a period of ten days and ten nights. Moreover, Delphis sits down beside Simaetha on the klintēr, and in line 139, *lektra*, 'marriage-bed,' is used as a synonym. In Lucian, *Symp.*, 8, all of the ladies who had been invited to the banquet occupied one klintēr, and in chapter 44 during the ensuing *mêlée* one of the male guests was thrown from a klintēr.

Two definitions of the word are preserved in the lexicographers. Hesychius defines the klintēr as δίφρος ἀνακλιτός, but the plural form is defined both as *diphroi* and as *klinai*. Elsewhere in defining δίφραξ, presumably of Theokritos 14, 41, Hesychius equates klintēr with a woman's thronos.¹²⁷ Photius says the klintēr is a sort of easy chair: εἶδος φορέιον ἔστιν δὲ καὶ κλινοκαθέδριον. *Et. Mag.* (s.v. πρόσκλιντρον) calls a klintēr a thronos which has a back (*prosklintron*).

The appearance of the word in our inscription shows that Ransom and Rodenwaldt erred in considering *klintēr* as a poetical variant of *kline*, and, indeed, Gow has observed that it is "rare in serious poetry."¹²⁸ In most, but not all, of the passages it is specified that a klintēr was an article of furniture for women. Two of the passages connect the word with leaning back. In modern Greek, klintēr means sofa or armchair. The composite picture that emerges is of something like the modern chaise-longue: a semi-reclining seat, large enough for more than one person. Such a seat, from Roman times, can be seen in Daremberg-Saglio, *Dictionnaire*, s.v. *Cathedra*, fig. 1252.

4. σκίμπους (III, 8; V, 9).¹²⁹ Mean bed, pallet. A separate article by Rodenwaldt is devoted to *skimpous* in the *R.E.* This is the most detailed study of the word. The brief article of Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Scimpodium*, contains in the footnotes the most complete list of ancient literary references.¹³⁰

Pollux lists the word under the genus of klinai.¹³¹ Hesychius explains the word

¹²⁵ *R.E.*, s.v. *Stuhl*, 399.

¹²⁶ *R.E.*, s.v. *Kline*, 847; cf. Ransom, *Couches and Beds*, p. 109.

¹²⁷ Gow (*ad* Theokritos 14, 41) states that the definition is "probably no more than an inference" from the Theocritean passage.

¹²⁸ *Ad* Theokritos, 24, 43.

¹²⁹ To these two references should now be added VI, 38, where the restoration [σκιμ]ποδες may be substituted for [κονί]ποδες. See above, p. 208.

¹³⁰ For the etymology of *skimpous*, see Walde-Hofmann, *Lateinisches etymologisches Wörterbuch*, s.v. *scamnum*.

¹³¹ X, 35.

as *κράββατος*, from which the modern Greek word for 'bed' (*κρεβάτι*) is derived.¹³² In the entry above, the diminutive form is defined as a 'cheap *klinidion* for one sleeper.' The scholiast on Aristophanes, *Nubes*, 254 gives *skimpous* as the Attic word for *κράββατος*. Pollux speaks of it as nothing more than a pallet.¹³³ Eustathius (*ad* Homer, *Iliad*, XVI, 608) likewise states that it is an Attic word and defines it as a cheap and low bed which is near the ground.

In *Nubes*, 254, in the caricature of the initiation of a neophyte into the secret mysteries, a 'sacred skimpous' takes the place of the thronos. At the beginning of Plato's *Protagoras* (310 c) Sokrates is represented as seated on a skimpous. In Xenophon (*Anab.* VI, 1, 4) the soldiers dined reclining upon them.¹³⁴ The picture which emerges is that of a low, humble bed, of light weight, which could be used by soldiers as a field-bed.¹³⁵

Price. The price paid for our skimpous in Stele III, line 8, was two obols.¹³⁶

5. *χάμευνα παράκολλος* (I, 231).¹³⁷ Veneered, low couch. Hesychius and the scholiast to Aristophanes, *Aves*, 816, define the *chameuna* as *ταπεινὴ κλινίς*, which by the etymology (*χαμαί*, 'on the ground') must refer to the low position of the bed and not to lowness in the sense of cheapness. Fraenkel (*ad* Aeschylus, *Agamemnon*, 1540) defines it as a 'poor and mean couch.'¹³⁸ He believes that the body of Agamemnon was exposed in a low and narrow bath-tub.¹³⁹ Pickard-Cambridge, on the other hand, believes that the conditions of the text are satisfied by the display of the body at the doorway on a very simple and unobtrusive vehicle.¹⁴⁰ All that is necessary to infer in the *Agamemnon*, 1540 passage is that the body of the king is in a low position.

The price paid for our *chameuna* is exactly twice the average price for a Milesian bed. Clearly, the *chameuna* was not poor and mean.¹⁴¹

¹³² Cf. Buck, *Dictionary*, p. 480. *Krabbatos* is frequent in later Greek, but was condemned as un-Attic by Phrynichos, 44.

¹³³ X, 35.

¹³⁴ Inferior manuscripts here read *στιβάσιν*, 'bed of straw or leaves.'

¹³⁵ Mrs. Karouzou (*A.J.A.*, L, 1946, p. 135) associates the skimpous with the festival of the Anthesteria, but her representations seem to be rather footstools.

¹³⁶ By the Roman period, *skimpous* or *skimpodium* had come to mean a single bed for a rich person. Thus Dio Cassius, LVII, 15, 4, refers to a "covered skimpodium such as the wives of the senators use." See Gellius, *N.A.*, XIX, 10, 1, and other references in Saglio. Cf. B. B. Rogers' note *ad Nubes*, 254. In Galen, the word is used for a sort of litter.

¹³⁷ For the accent of *chameuna*, see Schwyzler, *Gr. Gram.*, I, p. 476, and Buck and Petersen, *Reverse Index*, p. 294. In epigraphical publications, the word has usually been accented as a properispomenon. Liddell-Scott-Jones straddles the issue by using both accents (pp. 1313 and 1976).

¹³⁸ Similarly, Mau in *R.E.*, s.v. *Betten*, 371. Mau refers to an article in the *R.E.*, s.v. *χαμεύνη*, which I have been unable to locate. Hesychius' gloss of *chameune* as a *stibas* (= 'a bed of straw, rushes, or leaves,' Liddell-Scott-Jones) may derive from Euripides, *Rhesus*, 9, where the *chameuna* is modified by *φυλλόστρωτος*.

¹³⁹ *Op. cit.*, I, p. 175. ¹⁴⁰ *The Theatre of Dionysus in Athens*, Oxford, 1946, pp. 106-107.

¹⁴¹ The *chameuna*, of course, might be a simple inexpensive one (*λιτή*), as in Nikainetos, 6, 3.

Whereas chameuna is defined by Liddell-Scott-Jones as 'pallet-bed,' the παράκολλος chameuna of our inscription is defined as a 'low couch with only one end to it.'¹⁴² The meaning of *parakollos* is rather 'veneered' or 'tessellated,' as Blümner (*Technologie*, II, p. 328) and Ransom (*op. cit.*, p. 109) define it. Theophrastos (*H.P.* V, 7, 6; cf. IV, 3, 4) uses παρακολλήματα for the ornamental work attached to chests, footstools, and the like. The word means literally 'things glued on.'¹⁴³

6. ἐπικλιντρον (II, 235-236). Elbow- or head-rest for a couch. Two meanings for *epiklintron* are given in the *Thesaurus Graecae Linguae* and in Liddell-Scott-Jones: the first is 'comfortable chair or couch' and the second is 'arm or head-rest of a couch or bed.' Pollux mentions the term thrice (VI, 9; X, 34; IX, 72), in the first two cases clearly in the second sense, contrasting the *epiklintron* with the *enelata* or legs and lower frame of the bed or couch. A statement similar to that of Pollux, X, 34, is to be found in Phrynichos, frag. 130 (p. 207: ed. Rutherford), who defines *epiklintron* as the Attic word for *anaklintron*. A number of Delian inscriptions use the term, always as a part of a couch. For example, in *I.G.*, XI, 2, 147 B, lines 13-14, fifty beds are listed and four are specified as being without *epiklintra*.¹⁴⁴

It is in fact difficult to discover upon what evidence the first meaning is based. Liddell-Scott-Jones cites in its support Aristophanes, frag. 44 (= Pollux, IX, 72),¹⁴⁵ which is inconclusive, and Aristophanes, *Eccl.*, 907,¹⁴⁶ which does not bear out this meaning, since here the *epiklintron* is thrown down from a couch, and finally *I.G.*, II², 1541, line 26.¹⁴⁷ The latter is an inscription from Eleusis of 363/2 B.C. in which, at the end of a list of bed items, seven *epiklintra* are listed independently, followed by tables. The argument apparently is that an arm-rest of a couch cannot be a separate item in an inventory, and so these must be regarded as seven chairs. However, while this argument will hold for a chair-back, it will not necessarily apply to the elbow-rest at the end of a couch. Miss Ransom¹⁴⁸ has conjectured that some types of couch were portable and could be taken down and set up at any time; in her figure 28 she shows such a couch from two angles in a drawing which makes it clear that the

In this passage, quoted in Athenaeus, XV, 673 b, Gulick follows Dindorf in reading χαμεινάς, which on the evidence of our inscription must be corrected to χάμεινα (χαμμευνα: ms.).

¹⁴² P. 1313.

¹⁴³ κόλλα = glue. For various compounds, see Buck and Petersen, *Reverse Index*, p. 367.

¹⁴⁴ Cf. *I.G.*, XI, 2, 144, line 66; 163, lines 64-65.

¹⁴⁵ τοῦτ' αὐτὸ πρᾶττω, δὲ ὀβολὸν καὶ σύμβολον ὑπὸ τῷ ἐπικλιντρῳ.

¹⁴⁶ τό τ' ἐπικλιντρον ἀποβάλοιτο

βουλομένη σποδεῖσθαι,

καὶ τῆς κλίνης, κτλ.

¹⁴⁷ Liddell-Scott-Jones also cites Galen 12, 302 (Kühn, XVIII: 1, p. 344) as evidence for the meaning 'straight-backed chair'; however, the phrase here is ἐπικλιντρον τοῦ θρόνου, and the meaning is 'straight back of the chair.'

¹⁴⁸ *Couches and Beds*, p. 48, note 2.

basic structure was a perfectly symmetrical frame with four legs of equal length, to which was added at one end a curved rest so constructed that it could be fixed in place by means of pegs fitting into sockets made in the frame. The conjecture that such head-rests were often removable, and so could be considered separate items of furniture, finds support in the bronze beds of a later period which have been found at Priene and in the Boscoreale treasure.¹⁴⁹ These pieces have metal frames which are exactly alike at head and foot; resting lightly on the leg-tops at one end is a separate head-rest which is attached by two dowel pins which fit into small holes made both in the rest and in the center of the top surface of each leg piece.¹⁵⁰ K. G. Vollmoeller, in describing the stone beds of an Euboean tomb belonging to the fourth or third century B.C.,¹⁵¹ assumes that the head-rests were made as separate pieces, and that they were fixed in place by a ridge which fitted into a corresponding groove in the bed frame.

There is then no reason to assume that an epiklintron was a chair simply because it appears alone in furniture lists. It was an elbow- or head-rest which could be fitted onto couches and beds, or removed, at will. This is the explanation of the term in Aristophanes, *Eccl.*, 907; according to the old hag's taunts the girl will eagerly throw away the epiklintron of her couch in the hope of being crushed by her lover, only to be disappointed in his performance.

Price. In our inscription neither the price nor the amount of the sales tax for the epiklintron is preserved. However, the Delian inscriptions offer one clear price and some indirect evidence. In *I.G.*, XI, 2, 163, lines 64-65, it is recorded that two epiklintra were bought for the beds for 3 drachmas 4 obols, or 1 drachma 5 obols each; *I.G.*, XI, 2, 144, line 66, mentions a payment of 12 drachmas for wood for the epiklintra and feet of an unknown number of beds.

DOORS

In the Attic Stelai doors are listed among the items of furniture. This is not irregular, for apparently doors were treated as movable pieces of property. Kent¹⁵² has noted that in the Delian inventories of the hieropoioi buildings were regularly listed 'with a door' or 'without a door'; he shows also that in an Attic lease inscription of 306/5 B.C. the doors and roof tiling did not belong permanently to the real

¹⁴⁹ Wiegand and Schrader, *Priene*, Berlin, 1904, pp. 378 ff., figs. 480 and 481; *Arch. Anz.*, XV, 1900, pp. 178-179; Ransom, *op. cit.*, plates VIII-XVIII. Cf. the Etruscan couch with epiklintra at both ends, Studniczka, *op. cit.*, fig. 28, and the bronze couch in the Walters Art Gallery (D. K. Hill, *Journal of Walters Art Gallery*, XV-XVI, 1952-1953, pp. 49-61).

¹⁵⁰ A description and good pictures of such rests which were found in Italy appear in *Not. d. Scavi*, 1902, pp. 448 ff., figs. 17, 19a and b, 26, 27. See also the description and photographs of what Miss Hill, *op. cit.*, terms the *fulcra*.

¹⁵¹ *Ath. Mitt.*, XXVI, 1901, p. 371.

¹⁵² *Hesperia*, XVII, 1948, p. 293.

estate,¹⁵³ and that in a Tenian inscription of approximately the same date the doors were clearly not a part of the house.¹⁵⁴ In addition, Kent cites Greek leases of today, according to which the lessees furnish their own doors. Finley,¹⁵⁵ however, would argue that while doors might occasionally be movable, the general practice was to consider them as a fixed part of the building, since doors and roofs were usually not mentioned in mortgage inscriptions. Yet it is dangerous to draw conclusions *e silentio*, particularly in inscriptions; moreover, we cannot ignore the high cost of wood suitable for doors. The Attic Stelai add another example to those cited by Kent of a house which is specified as 'with a door' (IV, 20).

The fact that doors were auctioned separately shows that they were in effect items of movable property; it is also clear that the houses from which they came could be rented or sold doorless, and that there was an active market for doors which were not new. We may conclude from the evidence of Kent and Finley that in the case of rented houses custom varied; clearly many tenants were expected to bring their own doors with them when they moved into a house. Thus Thucydides (II, 14, 1) relates that the inhabitants of Attica brought the very woodwork from their houses into the city with them in 431 B.C.; this does not of course necessarily mean that what they salvaged was their own, but it does mean that they thought they would have a use for individual doors. There is a passage in Lysias, XIX, *The Property of Aristophanes*, 31, which describes the precautions taken to make sure that the doors of a house were not stolen, and Robinson and Graham¹⁵⁶ note that the scarcity of door hardware to be found at Olynthos is probably due to the "wholesale removal of the doors after the destruction of the city."

The following terms for doors are used in our inscription: *θύρα*, *θύρα σαπρά*, *θύρα διάπριστος*, *θύρα συνδρομάδη*, *κλισιάδες*, *κλισιάδες σαπραί*, *κηπαία*. On the derivation of the word *thyra* see Buck, *Dictionary*, p. 465, and for a general list of Greek terms for doors, Pollux, I, 76. H. Klenk has written a Giessen dissertation, *Die antike Tür* (1924), which is based on literary and inscriptional evidence and refers to examples in ancient art. This work suffers from its lack of illustrations or diagrams, and from its failure to take advantage of archaeological findings. The use of inscriptions is unmethodical and incomplete; all the detailed evidence as to construction and cost which the building records can offer has been ignored. In H. Diels' *Parmenides* there is an Appendix, "Ueber altgriechische Thüren und Schlösser";¹⁵⁷ this is an extended commentary on the *Proemion*, 11, 11-15, but its emphasis is almost entirely upon techniques of barring and locking doors, and not on the doors themselves. There is a

¹⁵³ *I.G.*, II², 2499, lines 11-14 and 30-37.

¹⁵⁴ *I.G.*, XII, 5, 872, line 44.

¹⁵⁵ *Land and Credit*, pp. 72 and 261, note 120.

¹⁵⁶ *Olynthus*, VIII, p. 257.

¹⁵⁷ Berlin, 1897, pp. 117-151; also published in his *Antike Technik*.

section on temple doors in Ebert, *Fachausdrücke*, pp. 19-22, 52-58. The most usable general article on the Greek door is that of E. Pottier in Daremberg-Saglio, *Dictionnaire*, s.v. *Janua*, which includes a number of illustrations from vase-paintings, and a history of the development of the door. The article by Ebert in *R.E.*, s.v. *Thyra* is briefer and more concerned with details of technique and terminology. On the woods used and the care taken in constructing doors, see Theophrastos, *H.P.*, V, 3, 5.

Most representations of doors in art show temple or palace entrances, but house doors are by no means unknown on vases.¹⁵⁸ References to house doors in ancient authors are frequent, but seldom explicit enough to be very helpful. Thus the most valuable treatment of doors for the purpose of this study is that of Robinson and Graham.¹⁵⁹

Houses in Olynthos had single or double doors, and in three instances the same house had a single and a double door set side by side, one presumably for pedestrians, the other for carts and animals. The house doors were set flush in the wall, sometimes under a small projecting roof, and sometimes within a shallow porch or *prothyron*. There were no wooden doors found at Olynthos, but from odd fittings and from pictures of ancient doors it can be assumed that a house door of the fifth century was made of vertical boards held together by three cross-pieces (*ζυγά*),¹⁶⁰ the middle one a little above center, fixed by decorative bronze nails. Doorways at Olynthos were between 0.90 and 1.40 meters in width. The door was hung on a vertical pivot of wood which was as a rule tipped with bronze at the bottom end and fixed in bronze or stone sockets set in the threshold and the lintel.¹⁶¹ These doors consistently opened inward.¹⁶²

The house doors at Delos were more elegant than those at Olynthos, with stone frames and carved lintels; one in the neighborhood of the theatre measured 1.78 m.

¹⁵⁸ In vase-painting, they were especially popular in works of the Meidian circle, and most particularly on pyxides showing scenes of women's activities. See *C.V.A., U.S.A., Robinson Collection*, fasc. 3, pl. 11 and p. 20, fig. 1; *C.V.A., Bonn*, pl. 27, 4; *C.V.A., Copenhagen*, fasc. 4, pl. 162, 5 b; Furtwängler-Reichhold, *Griechische Vasenmalerei*, pl. 57, 1 and 3; Pfuhl, *Malerei und Zeichnung der Griechen*, III, fig. 580 (all double doors); *C.V.A., Bonn*, fasc. 1, pl. 25, 4 (single door); Van Hoorn, *Choes and Anthesteria*, Leiden, 1951, no. 761, fig. 117; Pfuhl, *op. cit.*, pl. 561 (double door, opened).

¹⁵⁹ *Olynthus*, VIII, pp. 153 ff. and pp. 249 ff. with plates 69-72. For stone doors, see the literature cited on page 252, note 6.

¹⁶⁰ See Ebert, *Fachausdrücke*, p. 53.

¹⁶¹ The pivot was called *στροφεύς*, *στροφίξ* or *ἄξων*: the cap at the bottom was the *σύριγξ* or *χοινίκis* (*χοινίκη*): the socket was the *ληνός* or *ὄλμος* (*ὄλμίσκος*), according to Robinson and Graham, *Olynthus*, VIII, p. 254, note 15; actual finds of these objects are listed in *Olynthus*, X, p. 295, and good pictures of them can be found in *Délos*, VIII, 2, fig. 157; cf. Wiegand, *Priene*, pp. 304 f. The socket was also *ὑποδοχείον*: *I.G.*, XI, 2, 287 A, line 116. These terms are also discussed by Klenk, *op. cit.*, pp. 39 ff., and Ebert, *Fachausdrücke*, p. 55. Some modern Greek doors still are hung in exactly the same way; see R. H. Dawkins, *B.S.A.*, IX, 1902-1903, p. 184.

¹⁶² Compare this description with Parmenides' *Proem*, 11, 11-12.

in width at bottom and 1.64 m. at top, and 3.17 m. in height, but another was only 2.17 m. in height.¹⁶³ There is some further evidence in inscriptions as to the size of doors, but these are usually in public records and refer to buildings of considerable size. Thus we learn that the doors to the arsenal of Philo in the Piraeus were 15½ ft. high, under a lintel 12 ft. across,¹⁶⁴ and that at Eleusis the jambs of a door were made of four stones, each 5 ft. in height and 3 ft. in width, making a door of a little under 10 feet.¹⁶⁵

1. *θύρα* (II, 13-16; V, 3, 6). Door. The Attic Stelai list one door without any description (V, 6), three *θύραι σαπραί* (V, 3), one *θύρα διάπριστος* (II, 13-14), and *θύρα συνδρομάδε* (II, 15-16) in the dual number. The listing of the rotten or damaged doors is a reminder that all of these items were second-hand, a fact which must be borne in mind when the prices are compared to prices for new objects. The first problem that arises about these terms is whether or not a door listed simply as *thyra* was single or double.¹⁶⁶ The usage of other inscriptions seems to indicate that the singular might be used to indicate the two leaves of a temple door: the expression *θυρῶν ζεύγος*¹⁶⁷ is sometimes employed, but so also is *thyra monothyros*,¹⁶⁸ which would not be necessary if the plural were always used for a double door; individual leaves of a double door are called the right or the left door.¹⁶⁹ However, since we have a separate listing of *κλισιάδες* (V, 2), which regularly has the meaning of double door (see below, p. 239), we can consider the *θύραι* in the Attic Stelai as having only one leaf. It is probably also safe to assume that these were outside doors, for the average Greek house seldom used doors inside, except occasionally for women's quarters or a store-room;¹⁷⁰ the passages from room to room were closed, if at all, by hangings (see *παραπέτασμα*, pp. 248-250).

The phrase *θύρα διάπριστος* immediately suggests the modern Dutch-door, saved horizontally through the middle so that top or bottom may open separately. Pollux, X, 24, lists such a door, evidently having found it in a source which goes back to this inscription, for he follows it with *θύραι συνδρομάδες*, and fails to describe either. A red-figured krater in the British Museum¹⁷¹ shows a half-door, closed at the bottom

¹⁶³ *Délos*, VIII, 2, p. 265.

¹⁶⁴ *I.G.*, II², 1668, lines 30 ff.

¹⁶⁵ *I.G.*, II², 1672, line 131.

¹⁶⁶ Gow, *ad* Theokritos 2, 6: "The plural is used in earlier Greek, as at 15.65, 24.15, 29.39, of the double doors of palace, temple or courtyard, *θύρα* being the door of a private house. T. however, uses singular and plural indifferently of Simaetha's door (31, 104, 127, cf. 6.32, 14.42 . . .)."

¹⁶⁷ *I.G.*, I², 313, II, line 123.

¹⁶⁸ *I.G.*, II², 1627, line 418; II², 2500, lines 43 ff.; IV², 110, line 33, here used to distinguish from other doors called simply *θύραι*.

¹⁶⁹ *I.G.*, II², 1457, line 16.

¹⁷⁰ Aristophanes, *Thesm.*, 414-428.

¹⁷¹ Walters, *Catalogue of Greek and Etruscan Vases in the British Museum*, IV, p. 43, F65 = Beazley, *A.R.V.*, p. 791, 23.

and opened (inwards, but clearly shown in perspective) at top, with a boy leaning out; this surely is the *θύρα διάπριστος*.¹⁷²

The *θύρα συνδρομάδε* (dual) is a much more difficult problem, for the term itself suggests something for which we can find only one piece of evidence—a sliding door.¹⁷³ The expression occurs (outside of Pollux, which is not an independent notice) so far as I know only here and in *I.G.*, II², 2500, the record of the establishment of a *synoikia* by the Eleusinians in Thriasian territory. There is a list of all the doors in the building, with the final item preserved being one sawn-through door and eleven *thyrai syndromades*.

There are several terms which are used to describe the usual pair of doors which close together at the center,¹⁷⁴ and it may be that *syndromade* was merely another of these, applying to some slight variation in the way the actual closing was made. It seems more likely, however, that the syndromas was a true folding door, that is, one made of three or four leaves,¹⁷⁵ hinged¹⁷⁶ together to make a single or double door. Such a door would be hung in the same way as an ordinary door, and so would leave no special evidence in the archaeological remains, while yet its movement in closing might accurately be described by its name. The conjecture that such doors existed at Delos and at Pompeii has already been made¹⁷⁷ and a pair can be seen on a large standing cupboard in a fresco from Herculaneum,¹⁷⁸ but they have not been connected with the term *συνδρομάς*.

Prices. Most prices which can be found are for temple doors¹⁷⁹ and so cannot be

¹⁷² This example is also noted by Robinson and Graham, *Olynthus*, VIII, p. 252, note 4^a. It should be remarked that Galen, 12,303 (Kühn, XVIII, 1, p. 345) describes such a door but calls it *thyrai dikleides*.

¹⁷³ Certainly nothing in the doorways at Olynthos showed the slightest indication of any but the type of closing described above. But the cuttings for the grille on the outer side of the doorway of the Tholos at Delphi suggest a folding arrangement: *Delphes*, II, 2, p. 17. This reference I owe to H. A. Thompson.

¹⁷⁴ *θυρών ζεύγος, θύραι δικλίδες, κλισιάδες, θύρα διπλή, πτυχές, σανίδες*.

¹⁷⁵ There are three-leaved doors pictured at Herculaneum (see Overbeck, *Pompeii*, Leipzig, 1884, fig. 77) but it is impossible to tell whether each leaf opened independently in its own doorway, or whether this was a true folding door. Vitruvius (*De arch.* IV, 6, 5-6) speaks of a four-leaved door; Klenk (*op. cit.*, p. 14) assumes that this is an ordinary double door sawn through horizontally, but this conclusion cannot be supported by any ancient evidence.

¹⁷⁶ Hinges were found at Olynthos; see Robinson, *Olynthus*, X, pp. 299-301.

¹⁷⁷ *Délos*, VIII, pp. 265-266, "Les baies des boutiques quelquefois beaucoup plus larges que celles des habitations, étaient fermées soit par de véritables portes à vantaux, soit par des volets mobiles. Il semble que, dans le premier cas, l'un des vantaux était plus large, et formé sans doute de deux panneaux de rabattant l'un sur l'autre." Overbeck, *op. cit.*, pp. 252-253, in treating the house doors at Pompeii, assumes that the three-leaved doors of the House of the Fawn and the House of Epidius Rufus had the middle panel hinged to one of its neighbors.

¹⁷⁸ Overbeck, *op. cit.*, fig. 301.

¹⁷⁹ *I.G.*, XI, 2, 199, line 76, notes payments of 570 drachmas to two workmen for doors, and *I.G.*, IV², 102, line 37, lists a payment of 219 drachmas for doors of the *ergasterion* of the Ask-

compared to those listed in the Attic Stelai. However, there are a few modestly priced doors in other inscriptions. *I.G.*, IV², 110, line 25, lists a payment of 20 drachmas 3½ obols for each pair of house doors made for properties at the Asklepieion at Epidauros (fourth to third century); another group of doors was made by the same workman for 39 drachmas 2 obols each, whether double or single (lines 31 ff.). In *I.G.*, XI, 2, 147, line 11, a door to the Delian *abatos* was bought from Hierakos for 18 drachmas. Another Delian house door was bought for a price which must be restored as 11 drachmas 2 obols, 12 drachmas 1 obol, or 13 drachmas (*I.G.*, XI, 2, 159, line 56).¹⁸⁰ Other prices for parts of doors can be found: *I.G.*, XI, 2, 165, line 4, lists two lime-wood boards for the *kymatia* of the pronaos doors at probably 20 drachmas, and 147, line 11, shows that the bosses for one door cost 1 drachma 4 obols.¹⁸¹

We cannot be sure just what the door prices listed above included; in the case of the double and single doors made for the Asklepieion, the term *θυρώματα* is used, and it is quite certain that doorposts were included, with perhaps also lintel and threshold, which would explain the high price. The first Delian door, on the other hand, was probably nothing but the leaf itself, without even its decorative bosses, which are listed as the following item.¹⁸² Since the doors in the Attic Stelai were taken from houses, they presumably did not include frames or lintels; this impression is confirmed by the fact that there is a separate listing of six doorposts (see below, p. 240). Whether or not these doors still bore their metal fittings we do not know.

Price. The only door in our list for which there is an indicative partial price is the *thyra syndromas*; the restoration of a price of 23 drachmas 1 obol for the two

lepieion, where iron for two doors cost 708 drachmas (line 61) and ivory for other doors cost 3,150 drachmas (line 65). Temple doors might be decorated with designs in heated colored wax; see *Insc. Délos*, 290, lines 144 ff., where 69 drachmas were paid *τὰς προηγεμίδας θύρας ἐγκανσαί* and the same for the doors behind the altar.

¹⁸⁰ There are also some inconclusive prices from Delos: *I.G.*, XI, 2, 163, lines 2 ff., mentions that Demetrios was paid 200 drachmas for making 30 minas' weight of doors and a window, but the line is incomplete; he may have made other things too, and we do not know how much a single door weighed. The fact that the weight is given suggests that these doors were metal covered. XI, 2, 154 A, line 4, notes a payment of 20 drachmas for doors and windows of the hestiatorion, but again the line is broken and we cannot be sure that this was not merely a payment for repairs.

¹⁸¹ Some doors were covered with pitch; see *I.G.*, XI, 2, 158, line 78. We know that one metretes of pitch cost about 20 drachmas (line 76—20 drachmas 4 obols; cf. *I.G.*, XI, 2, 199, line 36) at Delos, and it is recorded in *I.G.*, XI, 2, 204, line 59, that a workman was paid 12 drachmas for thus sealing a number of doors.

¹⁸² There are some recoverable prices for door hardware: *amphidai* (the rings into which the bolt slid in fastening the doors) could cost 1 drachma each (*I.G.*, XI, 2, 147, line 4) or somewhat less (several for 1 drachma 2 plus obols: *I.G.*, XI, 2, 156, line 53). *I.G.*, XI, 2, 165, line 28, lists a number of items of hardware which seem to have been bought all at the one price of 1 drachma 3 obols per mina (cf. lines 11 ff.). For the pronaos doors (line 30) 8 pairs of *choinikes* (sockets for the posts) were required, at 4 drachmas a pair. See also *I.G.*, XI, 2, 287, lines 115-116.

suits the other house-door prices which have been found. It seems likely that the price of the *thyra diaphristos* was 20 drachmas 4 obols.

2. *κηπαία* (V, 40). Garden gate. Near the listings of a *phatne* and a pigpen in Stele V is the phrase *κηπαία ἐπὶ τῷ βοῶνι*. *Kepaia* is short for *kepaia thyra* (see Pollux I, 76 and IX, 13), which is usually taken to mean the back door of a house (*Olynthus*, VIII, p. 152, note 4). That it was not merely a garden gate is shown by [Demos-thenes] XLVII, *Against Euergos and Mnesiboulos*, 53, where a violent entry into a farm house was made through the door which led to the garden (*τὴν θύραν τὴν εἰς τὸν κῆπον φέρουσαν*). A second passage which should be helpful in defining the *kepaia* is a fragment from Hermippos: ¹⁸³ *τὴν δὲ τάλαιναν πλάστιγγ' ἂν ἴδοις παρὰ τὸν στροφέα τῆς κηπαίας ἐν τοῖσι κορήμασιν οὔσαν*. Here the *kepaia* is the door out of which refuse was thrown.

The problem to be solved in trying to visualize our *kepaia* is what the modifying phrase *ἐπὶ τῷ βοῶνι* means. If the *kepaia* is always a house door, then here we have a back door, opening into an attached cow shed, or leading to a detached cow shed. But the phrase should describe some permanent characteristic of the door—the mere fact that it once, on a certain house, led out towards a shed need not have been recorded in this list. Therefore, if these are the only alternatives, the first must be chosen, and the door thought of as of a special sort which ordinarily separated house from shed. However, it is possible that this door may have been a cow shed door and not a house door at all.¹⁸⁴ In either case the *kepaia* was presumably of much rougher and cheaper construction than any door which would be placed at the front of a house, but necessarily strong enough not to be knocked down by the animals.

3. *κλισιάδες* (V, 2, 39). Broad double door. In Stele V there are two entries, one of *klisiades* and one of *klisiades saprai*; in neither case is a price preserved. This term is derived from *κλεισίον* or *κλισίον*, which is from *κλίνω*, according to Liddell-Scott-Jones, thus doors belonging to a lean-to or outhouse. However, Pollux derived it from *κλείω* (IX, 50), and he has been followed by Dindorf. The word *klisiades* is used sometimes for an outer or street door (Dionysios Halikarnassos V, 39), sometimes for an inner door which connects the vestibule with the house (Philo Mech., I, 520). Suidas and Hesychius define it simply as a 'double door,' *θύραι δίπτυχοι*, while Pollux (IV, 125) uses it as the door of the *κλισίον*, which is wide enough to allow chariots to pass. *Et. Mag.* suggests that the connection with *klision*, which can mean stable, shows that such a door was wide enough for a yoked team,¹⁸⁵ and Herodotos

¹⁸³ Kock, *C.A.F.*, I, p. 238.

¹⁸⁴ On cow sheds, see H. Kraemer, *R.E.*, Suppl. 7, *s.v.* *Rind*, and Alphonse Hauger, *Zur römischen Landwirtschaft und Haustierzucht*, Hanover, 1921, especially p. 16. Doors to sheds were in demand, just as house doors were, as we know from *B.C.H.*, XXXV, 1911, p. 243, lines 50 ff., where there is mention of a *προβατῶνα ἄθυρα*, and a *βούστασιν* still presumably possessing a door.

¹⁸⁵ Cf. Photius, *s.v.*, where the door is wide enough for a pair of animals.

(IX, 9) uses the term simply to denote a very broad gate in a wall (cf. Plutarch, *Alc.*, 10).

We have then a broad double door, more expensive than the doors called simply *thyrai*, which we have assumed had only a single leaf.

4. *φλιά* (V, 19). Doorjamb. Six *phliai* are listed among the furniture items in Stele V. This term seems to have had two meanings, an older, particular one—‘doorjamb,’ and a later, general one—any part of the framework of a door. However, the second usage does not appear much earlier than Apollonios Rhodios (III, 278), where the meaning is ‘lintel’; it is most frequent among very late writers (Artemidoros, *On.*, 4, 42; Schol. Gen. H to II. XXIII, 202; Quintus Smyrnaeus, 7, 338; Palladios, *Hist. Laus.*, XII, 3 and XVIII, 23; Suidas *s.v.* οὐδός). As ‘jamb’ the word appears in *Od.*, XVII, 221; Theokritos, 23, 18; Bion, 1, 87; Kallimachos, *Iamb.*, 4, 24 and 91 (Pfeiffer, frag. 194) and *Epig.*, 42, 5-6; Polybios, XII, 11, 2; Josephus, *A.J.*, V, 305.¹⁸⁶ The usual word for doorjamb in inscriptions is *parastas* (see Pollux, I, 76, where *stathmoi* are equated with *parastades*, but *phliai* are not mentioned), but *phlia* occurs in *I.G.*, I², 386, line 6; *I.G.*, XII, 3, 170, line 24; *I.G.*, XII, 7, 237, line 50; in each of these cases the meaning is ‘jamb.’

In temples, public buildings and very fine houses the door frames were of stone¹⁸⁷ but the jambs sold among the possessions of the Hermokopidai were surely wooden, of the sort pictured in *Olynthus*, VIII, p. 250, fig. 21.

LAMPSTANDS

λυχνεῖον (II, 199-200). Lampstand.¹⁸⁸ There seems to be no reference to the word *lychnceion* in Toutain’s article in Daremberg-Saglio, *s.v.* *Lucerna*, or in Hug’s in *R.E.*, *s.v.* *Lucerna*.

The most pertinent literary passage for this word occurs in Athenaeus, XV, 700 c-d,¹⁸⁹ where the author collects passages to illustrate the use of the word *lychnceion* for what in his day was called *lychnia*.¹⁹⁰ Rutherford (*op. cit.*, p. 132) states that the *lychnceion* was used indoors to support or suspend one or more *lychnoi*.

¹⁸⁶ See Gow’s discussion, *Theocritus*, II, pp. 47 and 410.

¹⁸⁷ See, for instance, *Délos*, VIII, 2, figs. 127-131; in *I.G.*, II², 1672, line 129, a threshold is listed at ΔΔ., but since this one was probably of marble it does not help us to conjecture a price for the *phliai* in Stele V.

¹⁸⁸ For the etymology, see Boisacq, *Dictionnaire*⁴, *s.v.* λευκός; and Buck, *Dictionary*, p. 483. Liddell-Scott-Jones defines *λυχνούχος* as ‘lampstand.’ As Rutherford has shown (*The New Phrynichus*, London, 1881, p. 131), however, *lychnouchos* was more correctly a lantern used in the open air. See also Gulick *ad* Athenaeus, XV, 699 f in the Loeb Classical Library.

¹⁸⁹ For epigraphical references, see, for example, *I.G.*, I², 313, line 142 (408/7 B.C.); II², 1425, line 348; etc.

¹⁹⁰ For *lychnia*, a shortened form of *lychnceion*, and condemned by Phrynichos, see Rutherford, *op. cit.*, p. 367. See also Gow *ad* Theokritos, 21, 36, vol. II, p. 377.

Our two lampstands were made of wood, and must have been of very simple construction, since the price was one obol each. An article of J. D. Beazley's on lamps of the archaic period¹⁹¹ gives a clue to the sort of stand which seems most likely. From the lamps collected, three sorts of stands can be inferred: (1) a tripod,¹⁹² wall bracket, or upright with an arm, from which the lamp was suspended by chains or thongs; (2) a stand ring, of metal or terracotta, in an ornate or simple form¹⁹³ (a wooden stand ring is not likely); (3) a spike which went through the central hole of a circular lamp, with a ridge at a short distance from the top, on which the lamp would rest; at the bottom some kind of flat base to allow the spike to stand upright.¹⁹⁴ This last type suits the qualifications of our entry very well, since it would be easily made of wood and simpler even in construction than type 1, so that it might well sell for an obol. That such stands were common is shown by the number of lamps of the pierced variety which have been found.¹⁹⁵

Price. The price for the two wooden lampstands was two obols. For prices of expensive lampstands from Roman Egypt, see A. C. Johnson, *Economic Survey*, II, p. 473.

TABLES

1. *τράπεζα* (I, 110, 230; II, 149, 221, 222, 242-243; V, 88) and *τραπέζιον* (VI, 35; see above, p. 209). Table. The word *trapeza* originally meant 'four-footed'¹⁹⁶ and applied to a table around which people sat to eat. When the Greeks began to dine from couches a much smaller table could be used, and since it was customary to bring in tables and remove them sometimes several times during a meal,¹⁹⁷ they came to be of the lightest possible construction. The table most frequently pictured in the fifth century was small and rectangular, with two legs at the corners of one end, and a single leg centered at the other end.¹⁹⁸ This table continued to be called, inappropriately, a *trapeza*, but it could also be called a *tripous*.¹⁹⁹ The jokes of Ulpian Epicharmus

¹⁹¹ *J.H.S.*, LX, 1940, pp. 22-49.

¹⁹² Antiphanes (frag. 110: Kock, *C.A.F.*, II, p. 54) describes an improvised lychneion in the form of a tripod: "We fasten three javelins upright together and use them as a lampstand."

¹⁹³ Beazley, *op. cit.*, fig. 30; O. Broneer, *Corinth*, IV, 2, p. 49, fig. 24 (Hellenistic); Daremberg-Saglio, *Dictionnaire, s.v. Lucerna*, p. 1335, fig. 4606; Wiegand and Schrader, *Priene*, fig. 484; *Arch. Anz.*, 1900, p. 182, fig. 7.

¹⁹⁴ However, see H. A. Thompson, *Hesperia*, II, 1933, p. 198, note 1, who alone among those who have studied lamps seems to have doubts about this type of stand.

¹⁹⁵ Beazley, *op. cit.*, pp. 30, 33, 46; Broneer, *op. cit.*, p. 33; Deonna, *B.C.H.*, XXXII, 1908, pp. 140 ff., with references; Howland, *Athenian Agora, IV, Greek Lamps* (in press), Types 11, 19, 22, 26 A, 27 A-D.

¹⁹⁶ Buck, *Dictionary*, p. 483.

¹⁹⁷ For the use of tables in Greece, see, in particular, Richter, *op. cit.*, pp. 76 ff.

¹⁹⁸ Richter, *op. cit.*, figs. 195-205; Daremberg-Saglio, *Dictionnaire, s.v. Mensa*. Note also the greater stability of a three-legged table especially on a clay floor.

¹⁹⁹ For references to representations of tables of three legs from antiquity, see Schwendemann in *Jahrbuch*, XXXVI, 1921, pp. 114-120.

and Aristophanes quoted by Athenaeus²⁰⁰ are evidence that either term was used simply as a generic for 'table,' and one might find himself calling a four-legged piece *tripous*, or a three-legged one *trapeza*.²⁰¹ One of the tables in the Attic Stelai is specified as τετράπους (II, 242-243), which leads us to the conclusion that the others mentioned had only three legs.

The second question which arises concerns the shape of the tables in our list. Blümner, in his early article on Greek tables,²⁰² spoke of rectangular and round tables as main-course and dessert pieces, without considering which was the older form, but it is now customary to say that the round table so frequently seen on late pots and reliefs was not introduced until the fourth century.²⁰³ I have seen no specific literary reference to a round table earlier than the first century B.C.; Asklepiades of Myrlea explains in a passage quoted by Athenaeus (XI, 489 c) that the ancients thought the universe spherical and for this reason τὴν τράπεζαν κυκλοειδῆ κατεσκευάσαντο. Studniczka for some reason assumes that any table called a *tripous* was round and so cites Xenophon, *Anab.*, VII, 3, 21 and Antiphanes, frag. 287 (Kock, *C.A.F.*, II, p. 127), although there is nothing in either of these passages to suggest roundness. On the contrary, we know that the term *tripous* did not necessarily mean a round table, for in Athenaeus' (II, 49 a) anecdote of Ulpian it was applied to a rectangular four-legged table. However, if Pollux (X, 81) is right, the Attic Stelai once contained the term τράπεζα μονόκυκλος, which could only have been a circular table (the top was presumably made of a single piece); thus the period of the introduction of this style would have to be pushed back to the late fifth century. One would expect a new style to appear first at Athens, and in the houses of rich and fashionable men; we may suppose that this round table had the carved animal legs which characterized the round pieces of the following century.

Probably the tables which were listed simply as *trapeza* were rectangular, three-legged, and of the small size which might fit under a couch.²⁰⁴ Such tables were made

²⁰⁰ II, 49 a and c.

²⁰¹ Pollux (X, 69) notes that there was a sort of drinking table called a τράπεζα μονόπους.

²⁰² *Arch. Zeit.*, XLII, 1884, 179 ff. and 285; XLIII, 1885, 287 ff. He is followed by Kruse, *R.E.*, s.v. *Mensa*.

²⁰³ Richter, *op. cit.*, p. 87, where it is called "a Greek invention"; Reincke, *R.E.*, Suppl. 6, s.v. *Möbel*, p. 505, "Mit orientalischen Einflüssen zusammenzubringen ist wohl auch die im 4 Jhdt. neu auftretende Form des runden Tisches mit drei Tierfüssen"; Studniczka, *op. cit.*, pp. 123 ff.; Furtwängler, *op. cit.*, p. 38, of a round animal-legged table, "dergleichen niemals auf Vasen des fünften Jahrhunderts vorkommt." For other round tables, represented on the painted stelai of Demetrios Pagasai and dated at least as early as the third century B.C., see A. S. Arvanitopoulos, *Γράμματα Στήλαι*, 1928, pl. 10 (stela of Demetrios, son of Olympos) and pl. 7 (stela of Phila), both of which have more or less 'naturalistic' animal legs, three in number. Cf. also the 'drum table' in pl. 5 (stela of Choirile).

²⁰⁴ A Delian inscription of 364 B.C. distinguishes small and large tables, but gives no real indication of the size of either type; *B.C.H.*, X, 1886, p. 467, line 145.

of wood, maple ordinarily,²⁰⁵ or citrus for more expensive pieces. Luxurious tables might be carved and inlaid with ivory,²⁰⁶ decorated with bronze or silver feet, or even coated with silver.²⁰⁷ The legs were attached to the top, according to Richter,²⁰⁸ by wooden dowels; but in the Delian lists table items are usually followed by mention of bronze ἦλοι; either these were for decoration or else they were used to hold the piece together. In *I.G.*, XI, 199 A, line 43, it is specified that the nails were used in the feet (i. e., legs) of a table. The most famous ancient tables were Sicilian; a 'Syracusan table' was one that was both elegantly made and heavily laden.²⁰⁹

Prices. In I, 230, four tables were sold for 16 drachmas, or 4 drachmas apiece; in II, 242-3 the four-legged table, which was probably larger, sold for 6 drachmas 2 obols. The one clear-cut table price I have found in the Delian inscriptions is 4 drachmas 3 obols for a *τράπεζα εἰς ἱεροπόιον*.²¹⁰ Tables comparable to those in the Attic Stelai are probably referred to in *I.G.*, XI, 2, 144 A, line 60, where a workman was paid 7 drachmas to repair the doors and tables of the Dioskourion, using for the table bases wood bought for 4 drachmas 3 obols, and 2 drachmas' worth of nails. There were surely only two or three tables repaired at this time, since the price of a single nail was about 4 obols (*I.G.*, XI, 165, lines 13, 27), and thus only three or four at most were used. In the repair of the tables of the hestiatorion in the Asklepieion in the same year (line 67) boards for the tops and bases cost 12 drachmas but we do not know how many tables there were.

Pliny reports that Cicero paid a half-million sesterces for a table of Mauretanian citrus wood and ivory; a hanging table of King Juba was sold for 1,200,000 sesterces, and a table from the estate of the Cethegi was sold for 1,300,000 sesterces, the price of a large estate.²¹¹ It is interesting to note the relatively small size of the tables which Pliny mentions as the largest yet known: a table-top of only 4½ feet in diameter heads the list.

2. *φάτνη* (II, 39; V, 37). Manger, table. The specific meaning of *phatne* must be determined by the context.²¹² In architecture, the word was used for the coffer of

²⁰⁵ Kratinos *ap.* Athenaeus, II, 49 a; Pollux, X, 35. Wicker tables are restored in *I.G.*, I², 313, line 143.

²⁰⁶ Athenaeus, II, 49 a. See G. Bakalakis, 'Ελληνικά τραπεζοφόρα, *University of Mississippi and Johns Hopkins Studies in Archaeology*, No. 39, Thessaloniki, 1948.

²⁰⁷ *I.G.*, XI, 199 A, lines 82 ff. Herodotos, IX, 82, 2, mentions gold and silver tables among the possessions of Xerxes.

²⁰⁸ *Op. cit.*, p. 81.

²⁰⁹ Aristophanes, frag. 216 *ap.* Athenaeus, XII, 527 c; [Xenophon], *Epist.*, 1, 8; Plato, *Rep.*, III, 404 D; Lucian, *De mort.*, 9, 2.

²¹⁰ *I.G.*, XI, 2, 161 A, line 110 (279 B.C.).

²¹¹ Pliny, *H.N.*, XIII, 92-93; see also R. M. Haywood, "Roman Africa," *Economic Survey*, IV, p. 25; and *R.E.*, *s.v.* *Citrus*.

²¹² For the derivation of the word, see Boisacq, *Dictionnaire*⁴, *s.v.* *πάθνη*, a form which was supplanted by the Attic *phatne*.

the ceiling. It is there synonymous with *phatnoma* and in one building inscription the price for executing the work is given as 300 drachmas per *phatne*.²¹³ A coffer might be of wood, just as the *phatne* was in Stele II, 39.²¹⁴ However, the usual meaning of *phatne* is 'manger, feeding-trough,' for which Liddell-Scott-Jones gives numerous references. For example, Herodotos (IX, 70) states that the Tegeans dedicated to Athena Alea a bronze *phatne* which they found in Mardonios' tent on the Plataean battlefield.

Two factors must be considered in defining our *phatne*. The first is the position in the list; the second is the price. The entry in Stele II follows that of the entry for *kiste*, 'box' or 'basket'; in Stele V, those of *plinthoi* and *staphylobouloi*. In Stele II our article was made of wood, and the price is given as 10 drachmas 1 obol. It is possible that there was an otherwise unattested chest which was named *phatne* because of its shape, just as the coffer of the ceiling was so called because of its resemblance to a box. This would explain the juxtaposition of our entry to *kiste*. But Hesychius defines *phatne* simply as a *trapeza* and this definition is repeated in Suidas. The passages cited in Suidas are proverbial in the sense of ease and comfort and this is the use recognized in Liddell-Scott-Jones. For example, Euripides, frag. 379: ἡ τις . . . πλουσίαν ἔχη φάτνην. Back of this, however, may be the use of *phatne* as a 'dining table.' Hesychius' definition could then be understood in a literal sense.

FURNISHINGS

1. ἀμφιπάτης (I, 164-172).²¹⁵ Rug or blanket with pile on both sides. For the meaning of *amphi*- 'on both sides,' see Schwyzler, *Gr. Gram.*, II, p. 437. For the Iranian derivation of the word, see Boisacq, *Dictionnaire*⁴, p. 942; and Schroff, *R.E.*, s.v. *Tapes*. The word is defined in several lexicographers including Suidas, s.v.; Pollux, VI, 9; and Eustathius (*Commentarii ad Homeri Iliadem* . . . , p. 746, 39, citing Aelius Dionysius and Pausanias; and p. 1057, 8)²¹⁶ as a *tapes* having wool (*mallos* or *dasy*) on both sides.

The hitherto earliest known occurrence of the word was in the fourth-century comic poet Alexis (frag. 93: Kock, *C.A.F.*, II, p. 327). In a fragment from Diphilos the speaker had apparently been sleeping under the *amphitapes*.²¹⁷ In Athenaeus V,

²¹³ *I.G.*, XI, 2, 161 A, line 46. Cf. also the Delian account of the year 279, *Insc. Délos*, 504.

²¹⁴ *I.G.R.*, IV, 556 (Ancyra). For a study of *phatne* as an architectural term, see Ebert, *Fachausdrücke*, p. 47. Cf. *I.G.*, IV², 1, 109, III, line 85.

²¹⁵ For *δάπης* (vel *τάπης*), q.v.

²¹⁶ Cf. the convenient list of references in the *Thesaurus Graecae Linguae*. One lexicographer, Hesychius, offers a different definition, as follows: χιτῶν ἐκατέρωθεν ἔχων μαλλούς. Dindorf (*ad Thesaurus*) suggests that the first word is repeated from the definition of ἀμφιμάσχαλος.

²¹⁷ See Kock's note *ad* frag. 51 (*C.A.F.*, II, p. 558); and Studniczka, *op. cit.*, p. 121: "Zweiseitig wohl deshalb, weil sie auch zum Sinwickeln des gauzen Bettzeugs dienten."

197 b, purple amphotapoi were spread over the klinai (couches);²¹⁸ and in VI, 255 e, a young man of princely rank was covered with an amphotapos as he lay upon his couch spread with a *psilotapis*. In Homer, the uncompounded form *tapes* was used as a carpet, but more frequently signified a covering for seats and beds. In Pollux, X, 38, it is grouped with furnishings for beds. Whereas *tapes* designates various woven goods which are used for the furnishings of a house, all references to the compound *amphotapes* seem to be to a sort of blanket; this is not surprising since the amphotapes was reversible.²¹⁹

The amphotapetes are qualified by two adjectives:

A. λευκός, white. For *leukos*, as applied to a color, see the numerous references in the *Thesaurus* and in Liddell-Scott-Jones. For example, in Aristophanes, *Ach.*, 1024, the reference is to the white, or homespun, himation of the rustics from Phyle.²²⁰ In the Diocletian Edict, covers (*stromata*) were to be sold according to the dyeing and embroidery.²²¹

For *poikilos* as a descriptive adjective of bedding or carpets, see, e. g., Aeschylus, *Ag.*, 923; Plutarch, *Them.*, 29.

B. Ὀρχομένιος. The preserved letters are as follows: OIX[.]MENIO. In the left part of the fourth letter space there are probably traces of an omicron. The second and third letters were cut very close together; no correction of the upright stroke was possible without erasure. The original editor suggested Ὀ<ρ>χ[ο]μένιο(ς),²²² which seems the only possible reading.

The *R.E.* lists four towns of this name,²²³ and we cannot be sure which one was referred to here. Two of them, those in Thessaly and Euboea,²²⁴ seem unlikely because of distance and size respectively. To distinguish the remaining two, the practice of a second-century Delphic list referring to the Boeotian town as Ὀρχ — — and the Arcadian as Ἐρχ — — was unfortunately not otherwise adopted.²²⁵ No reference to Orchomenian woollens is contained in Athenaeus' catalogue of special products of

²¹⁸ For a detailed discussion of this passage, see Studniczka, *loc. cit.*

²¹⁹ Liddell-Scott-Jones refers to ψιλὰι *amphotapetes* in an inscription from Ionian Teos. The text in *C.I.G.*, II, 3071, is incomplete, and it is possible that in the phrase ἀμφιτά[πητας] ἐννέα ψιλὰς, ἐν[ν]έα — —, as punctuated by Boeckh, the ψιλὰς is a substantive (i. e., modified by the second ἐννέα) as it frequently was in late Greek, meaning 'carpets.' See, e. g., Liddell-Scott-Jones, *s.v.* ψιλός, II, b and Gulick *ad* Athenaeus V, 197 b.

²²⁰ See schol. *ad loc.*

²²¹ Col. XIX, 25.

²²² *Hesperia*, XVII, 1948, p. 34.

²²³ Discussion of the Boeotian city in the *R.E.* was reserved for Suppl. 8. In addition to the cities of Arcadia, Boeotia, and Thessaly, the scholiast *ad* Apollonios Rhodios, II, 1186, refers to a city of Pontus.

²²⁴ However, there are representations of Euboean tapides on the stone beds of two chamber-graves; see K. G. Vollmoeller, *Ath. Mitt.*, XXVI, 1901, pp. 331 ff. and pls. XVI-XVII.

²²⁵ *B.C.H.*, XLV, 1921, pp. 1 ff.

individual cities. He cites, rather, a fragment of Hermippos (frag. 63: Kock, *C.A.F.*, I, 243) in which reference is made to Carthage in connection with *dapis* and *proskephalaia*,²²⁶ and Milesian wool, woven into garments or rugs, was, of course, highly esteemed throughout the ancient world and its popularity continued for centuries.²²⁷ Two Cyprians were named as the chief artists in the textile profession.²²⁸ In Hellenistic and Roman times, Strabo informs us that wool from Spain, Patavium, Brundisium, and Laodicea was famous.²²⁹ Whereas one city, such as Miletos, won renown for the fineness of its fabrics,²³⁰ another, such as Megara, specialized in rough fabrics fit for slaves' clothing.²³¹ Since sheep were raised almost everywhere in mountainous districts including those of Arcadia and Boeotia, trade in textiles must have been considerable. The reference to Orchomenos in our inscription in itself, then, affords no clue to the nature of the blanket or carpet. Elsewhere, Athenaeus notes that Themistokles was presented by the Persian king with Perkote and Palaiskepsis to supply him bedding and clothing.^{231a}

2. *δάπης* (vel *τάπης*) (I, 175). Rug. The form *τάπης* has been restored in Part I, following the original editor, but *δάπης* would now seem to the present editor to be the more likely form. Boisacq, *Dictionnaire*⁴, p. 942, lists both as Attic, *δάπης* occurring in Aristophanes, Pherekrates, and Xenophon, and *τάπης* first in Xenophon.²³² Buck and Petersen use *δάπης* for the index form.²³³ Pollux in VI, 10, places the two forms beside each other, but in X, 38, in a section which contains a reference to our Stelai, the form is *dapis* and it is followed by *amphitapes*, which likewise occurs in our lists. Moreover, in Aelius Dionysius (frag. 116: ed. E. Schwabe), *δάπης* is recognized as the old Attic form.

The word is discussed *s.v.* *Tapes* by Schroff in the *R.E.*²³⁴ In Xenophon, *Cyr.*, VIII, 8, 16, the reference is clearly to a carpet, for the posts of the beds are placed on *dapides* that yield. In Aristophanes, *Plutus*, 528, on the other hand, the reference is to sleeping on *dapides*. In Athenaeus IV, 138 f, the *dapis* is spread upon a couch of wood. Hesychius defines *δάπης* simply as *tapes*. Aelius Dionysius defines the plural as

²²⁶ I, 28 a.

²²⁷ Aristophanes, *Lys.*, 729; *Ranac.*, 542; Cicero, *Verr.*, II: I, 34; Pliny, *H.N.*, VIII, 73; Horace, *Epist.*, I, 17, 30; Vergil, *Georg.*, III, 306; IV, 335; etc.

²²⁸ Athenaeus, II, 48 b.

²²⁹ III, 2, 6; V, 1, 12; VI, 3, 6; XII, 8, 16.

²³⁰ Cf. J. Röhlrig, *Der Handel von Milet*, Hamburg Diss., 1933, pp. 12, 22, 37.

²³¹ Aristophanes, *Ach.*, 519; *Pax*, 1002; Xenophon, *Mem.*, II, 7, 6.

^{231a} I, 29 f.

²³² *Tapis* is the form used in a Delian inventory of 301 B.C., *I.G.*, XI, 2, 147, B, line 12.

²³³ *Reverse Index*, p. 424. Since the modifying adjective, *poikile*, is in the feminine gender, the more common *τάπης* is not a possible restoration.

²³⁴ For a convenient collection of literary passages referring to coverlets and carpets (including *dapis*), see W. Miller, *Univ. of Missouri Studies*, VII, 1932, pp. 669-672.

stromata, something spread out for lying upon.²³⁵ The *dapis*, as the tapes, then, is a rug which could be spread upon the floor or on a bed.

3. ἐπιβλήτιον (I, 219-223). Bedspread. The word is known only from our inscription.²³⁶ The first four letters are not preserved on the stone, but were first restored by Wilhelm,²³⁷ who suggested that *epibletia* was identical with ἐπιβλήματα and ἐπιβόλαιαι of Pollux VI, 10, and that the meaning was 'bedspread' ('Bettdecken'). This meaning has been adopted in Liddell-Scott-Jones, and it would accord with the position of our word in Stele I, where it follows κνέφαλλον (lines 217-218).

4. κάννα (I, 238). Reed, reed-mat. *Kanna* is defined by Hesychius, Eustathius²³⁸ and the Ravenna scholiast to Aristophanes, *Vespa*, 394, as ψίαθος. Suidas mentions it in conjunction with reeds (*kalamoi*).²³⁹ Pollux (X, 183-184) is the chief source of information about the word. He quotes its use in Aristophanes, Pherekrates, Kratinos, Hipponax, and Eupolis (in X, 192), and defines it as wickerwork. In X, 166, he states that it is a *psiathos* or mat, used in light boats. For the Sumerian origin of the word through the intermediary of Babylonian, see Boisacq, *Dictionnaire*⁴, s.v.

5. κνέφαλλον (I, 217, 218; II, 218, 219). Cushion, mattress. Of the Greek words for pillows, cushions, mattresses, two occur in our inscription: κνέφαλλον and προσκεφάλαιον.²⁴⁰ Other words of this meaning are listed in Ransom, *Couches and Beds*, p. 110. The manufacture of cushions and its place in ancient industry are discussed by Blümner, *Technologie*, I², pp. 215-218. The *R.E.* article on this subject is by Herzog-Hauser, s.v. *Torus* (with bibliography), but there are references to pillows in Mau's article s.v. *Betten* and in Herzog-Hauser's article s.v. *Tomentum*. The subject is treated by Graillot in Daremberg-Saglio, *Dictionnaire*, s.v. *Torus*, with references to illustrations published throughout the *Dictionnaire*.

Knephallon is defined by both Hesychius and Suidas as τύλη.²⁴¹ Pollux (X, 41) speaks of it as soft bedding. The most interesting passage on the word is probably

²³⁵ Frag. 116: ed. E. Schwabe.

²³⁶ Cf. Liddell-Scott-Jones and Buck and Petersen, *Reverse Index*, p. 114.

²³⁷ *Jahreshefte*, VI, 1903, p. 240.

²³⁸ 1344, 42: *ad Il.*, XXIV, 189.

²³⁹ Cf. *Thesaurus*, s.v.

²⁴⁰ It should be noted that the ψίαθος, rush-mat, was also used as a mattress and in Stele II, when the word follows *proskephalaion* and *knephallon*, the position would lead us to favor this meaning. See below, p. 254.

²⁴¹ For the derivation of τύλη, see Boisacq, *Dictionnaire*⁴, s.v. τύλος. The word originally meant 'callus' (cf. Hesychius, s.v.), and was applied to a 'hump,' especially one that had been hardened by carrying burdens (see Starkie *ad* Aristophanes, *Ach.*, 860). When used as the word for a cushion, it could be applied even to the 'shoulder-pad' as in Diogenes Laertius, IX, 53. Artemidoros (V, 8) refers to a tyle stuffed with wheat. From such passages one might expect that the tyle was a hard cushion and *knephallon* a soft one, and this would be favored by the etymologies. In Sappho, 50 (Bergk), however, the adjective μαλθάκη, 'soft,' is applied to a tyle.

that of the grammarian Herodian in *Grammatici Graeci*, III, p. 944, lines 23 ff., where *knephallon* is referred to as an Attic form of *tyle* and quotations from Aristophanes and Plato Comicus are given. Herodian gives the derivation of the word from *κνάφος*, 'fuller's thistle,' which was used for cushioning.²⁴² Phrynichos (frag. 151) also refers to the word as Attic. Lobeck (*Phrynichi Eclogae Nominum*, p. 173) has suggested that in popular speech *τύλη* was equivalent to Latin *culcita*, 'cushion,' and *κνέφαλλον* to *tomentum*, the 'material for cushioning,' but in our reference to *κνέφαλλον πλέων* the word must be used for the cushion (or mattress) itself. Herzog-Hauser translates the two words as 'gefüllte Matratzen.'²⁴³

Illustrations of cushions are given by Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Pulvinus*.

Prices. In the Diocletian Edict, *γνάφαλλον* is the word used for cushioning or wool flock, and the maximum price was fixed at 8 denarii per pound.²⁴⁴ For the prices of mattresses and cushions in Egypt, see A. C. Johnson, "Roman Egypt," *Economic Survey*, II, pp. 472-473.

6. *παπατέασμα* (I, 173, 174, 232). Curtain, hanging. Suidas defines *parapetasma* as *παρακάλυμμα* or *παράπλωμα*, and a similar definition is found in Hesychius. Herodotos (IX, 82) mentions an embroidered hanging and Aristophanes (*Ranae*, 938) refers to Persian parapetasmata which contained representations of hybrid creatures.²⁴⁵ Pausanias (V, 12, 4) refers to an Assyrian parapetasma presented to the temple of Zeus at Olympia by Antiochos, which was suspended from the roof. Porphyry (*De antro nympharum*, 26 f.) states that in Greek temples the curtains were drawn at noon, and a sign was put on the door to warn people not to enter.²⁴⁶ Pollux (X, 32) refers to curtains at the door of the bedchamber. Robinson and Graham have deduced from the complete absence of pivot-holes in paved rooms at Olynthos that internal wooden doors were quite unusual and that probably parapetasmata took their place.²⁴⁷

The word is mentioned by Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Aulaea*, and is referred to by Deonna in *Délos*, XVIII, p. 263, note 11.²⁴⁸

The parapetasma in the text of I, 173 is modified by the adjective *ποικίλον*; of I, 232 by an adjective which has been restored as *[λιτ]όν*. When U. Köhler first published the fragment which has the text of I, 232, he restored *[λιω]οῦ[ν]* or *[ἀπλ]οῦ[ν]*. Wilhelm, however, republishing the text in *Jahreshefte*, VI, 1903, pp. 236-237, stated

²⁴² Cf. Boisacq, *Dictionnaire*⁴, s.v. *κνάφος*.

²⁴³ *R.E.*, s.v. *Tomentum*, 1699.

²⁴⁴ Col. XVIII, line 7.

²⁴⁵ Also, probably, Euripides, *Ion*, 1158; the term here is *ὑφάσματα*.

²⁴⁶ Cf. Fraser *ad* Pausanias V, 12, 4.

²⁴⁷ *Olynthus*, VIII, p. 251.

²⁴⁸ Cf. also Robinson, *Olynthus*, XII, p. 466.

that neither of these words could have been on the stone, for traces of them would now be visible. He proposed instead, [λιτ]όν, 'frugal,' which has been restored in all subsequent editions, including that in *Hesperia*, XXII, 1953. But such an adjective is clearly out of character in our document. One might expect a technical description of a parapetasma, or an adjective giving the place of manufacture, the type, or the condition, color, etc. Purely descriptive adjectives do not occur in the Attic Stelai. The present writer would, therefore, reject Wilhelm's restoration. But the lacuna between the alpha and the omicron may have been of two letter-spaces only. The traces which remain on the stone today are not conclusive.²⁴⁹ The distance from the rightmost part of the final alpha of *parapetasma* to the left part of the omicron in the word in question is 0.02 m. There is no other example on this fragment of three letters being inscribed in so small a space, as measured horizontally. The nearest parallel occurs three lines above where the crowded letters -σιο- occupy 0.022 m. If three letters are to be restored before the omicron, it would seem most likely that one of them was an iota.

With regard to the 'vari'-colored (*poikilon*) fabrics, with colored designs either embroidered or woven, we have very little direct evidence. All the more important, then, are the fragments, found recently in Koropi near Athens, of a linen textile embroidered in silver-gilt with a diaper pattern of walking lions, which evidently dates from the late fifth century.²⁵⁰ Pollux (X, 32) says that a parapetasma may be of simple white linen, of a dyed woven stuff, or it may be many-colored, like that mentioned by Aristophanes (frag. 611): παραπέτασμα Κύπριον τὸ ποικίλον. The wall paintings of Pompeii and Rome reproduce hangings in various colors,²⁵¹ and may afford some idea of earlier textiles. Theophrastos (*H.P.*, IV, 2, 7) mentions embroidered bed-hangings, and Rostovtzeff, *Soc. and Ec. Hist. of Hell. World*, III, p. 1412, note 177, refers to representations of such hangings on the front of funeral couches.

Price. The price of our parapetasma has been read as 10 drachmas 1 obol. This price hardly favors the restoration λιτόν 'frugal.' However, if the word λινόν, 'linen,' is restored, the high price would be understandable. For the manufacture of linen, see

²⁴⁹ Since ποικίλον was inscribed in I, 173, it is possible that the parapetasma in I, 232, was described by its color. In VII, 129, Pollux lists words for color, of which only φαῖόν, 'gray,' would meet the requirements of space in I, 232.

²⁵⁰ J. Beckwith, *Illustrated London News*, January 23, 1954, pp. 114-115. See, on Greek textiles in general, E. Buschor, *Beiträge zur Geschichte der griechischen Textilkunst*, Diss., Munich, 1912; A.J.B. Wace, *Jahreshefte*, XXXIX, 1952, pp. 111-118; and M. T. Picard-Schmitter, *Revue Arch.*, XLVI, 1955, pp. 17-26. See also the fifth-century polychrome wool carpet and tapestry found at Pazyryk in Central Siberia (*Illustrated London News*, July 11, 1953, pp. 69-71).

²⁵¹ See, e. g., G. E. Rizzo, *Monumenti della pittura ellenisticoromana*, III, fasc. I, Roma, 1936; and H. G. Beyen, *Die pompeianische Wanddekoration vom zweiten bis zum vierten Stil*, I, 1938.

Blümner, *Technologie*, I², pp. 191 ff. For prices, see, in particular, the Edict of Diocletian, cols. XXVI-XXVIII, inclusive.

7. *πίναξ*. (VII, 59, 60-61, 62). Picture, painted board. At the end of a long listing of wine jars and other vessels in Stele VII come three notations of the sale of *pinakes*. This is a word of many meanings: it might be simply a board or plank,²⁵² a hard piece of wood on which knives were sharpened,²⁵³ a plate from which one ate,²⁵⁴ or a table,²⁵⁵ but in the fifth century it most frequently referred to a piece of wood (or possibly terracotta or metal) on which something was written, drawn, or painted.²⁵⁶ The pinax in this latter sense could be a votive plaque,²⁵⁷ a public notice,²⁵⁸ or a writing tablet;²⁵⁹ the surface might bear a picture,²⁶⁰ a map, or a chart.²⁶¹ Since our pinakes were household objects of some value, many of these meanings can be ruled out as inappropriate; quite evidently the confiscated plaques were pictures which had decorated the houses of the condemned men.

At the end of the fifth century murals were no longer the dominant form which Greek painting took; instead, panel pictures (*pinakes*) became more and more popular.²⁶² Votive plaques had in the past borne drawings as well as inscriptions,²⁶³ but their purpose had been primarily to communicate a message to the god, not necessarily to please the human eye. We have examples of these earlier, utilitarian paintings in the Pente Skouphia pinakes,²⁶⁴ which record pictorially the processes of mining and smelting. The small pictures hanging on the wall of the Berlin cup sculptor's shop

²⁵² Blümner, *Technologie*, II, p. 305; *Ath. Mitt.*, VIII, 1883, p. 163.

²⁵³ Theophrastos, *H.P.*, V, 5, 1; Hesychius, *s.v.* *πίνακας*; Blümner, *Technologie*, I², p. 279.

²⁵⁴ *Odyssey*, I, 141 and XVI, 49; Pollux, X, 82; Athenaeus, IV, 128 d; Thomas Magister, 714.

²⁵⁵ Pollux, III, 84.

²⁵⁶ Occasionally the word *pinax* was used to denote the message itself, and not the plaque on which it was inscribed. It later took on the special meaning of 'list' or 'index,' and in this form it is studied by Regenbogen in *R.E.*, *s.v.* *Pinax*. The multiple meanings of this word are made the basis of a pun in a votive poem; see Pfeiffer, *Callim.*, II, 96, E 54.

²⁵⁷ Aeschylus, *Supp.*, 463; Aristophanes, *Thesm.*, 778; Strabo, VIII, 6, 15; *I.G.*, IV², 121, lines 24 ff.

²⁵⁸ Plato, *Critias*, 120c; Aristotle, *Pol.*, 1341a, 36; Plutarch, *Them.*, 5. For pinakes used for inscriptions, see Wilhelm, *Beiträge zur griech. Insch.*, Vienna, 1909, pp. 239 ff.

²⁵⁹ *Iliad*, VI, 169; Aeschylus, *Supp.*, 946; Plato, *Rep.*, 501a; *Anth. Pal.*, XI, 126.

²⁶⁰ Plutarch, *Arat.*, 12; Athenaeus, XII, 543 f.; Theophrastos, *H.P.*, III, 9, 7; V, 7, 4.

²⁶¹ Herodotos, V, 49; Plutarch, *Thes.*, 1; *Rom.*, 12; Strabo, I, 1, 11.

²⁶² Blümner, *Technologie*, IV, p. 431. Cf. M. H. Swindler, *Ancient Painting*, New Haven, 1929, p. 217.

²⁶³ For example the early proto-Attic Sounion plaque of ca. 700 B.C. (*B.S.A.*, XXXV, 1934-1935, pl. 40 b). The subject of painted votive plaques has recently been treated by J. Boardman (*B.S.A.*, XLIX, 1954, pp. 183-201), to whom the student of the history of painted plaques should be referred for detailed bibliography.

²⁶⁴ Blümner, *Technologie*, IV, pp. 204-205; see Davidson, *Corinth*, XII, p. 64; and Newhall, *A.J.A.*, XXXV, 1931, pp. 20-22.

show, more delicately but still very simply, two human figures, a centaur, and a deer; they are hung around a male and a female mask, and Blümner supposes that they may have been models or votive offerings.²⁶⁵ The victor in the games often dedicated a pinax which represented himself; on a vase in Munich is a man who carries a small plaque painted with the silhouette of a runner.²⁶⁶ Votive pictures of a far different sort were dedicated by Alkibiades in the Acropolis Pinakothek to commemorate his victories in the games;²⁶⁷ from Satyros' description of them²⁶⁸ we can gather an impression of their complex subjects and necessarily more elaborate technique. One of the paintings showed Olympias and Pythias in the act of crowning Alkibiades, while in the other Nemea was figured, attended by women and holding on her knees an Alkibiades whose beauty far outshone that of all the other faces in the picture. The paintings in our list were doubtless on a smaller scale, but they were probably similar to these in style and conception. Alkibiades' dedications are thought to have been the work of Aristophon,²⁶⁹ who at other times treated scenes from the Trojan war and the journey of the Argonauts.²⁷⁰ Another popular private painter of the last decades of the fifth century was Parrhasios, whose work must have been of considerable magnificence, for one of his paintings appealed to the taste of Tiberius.²⁷¹ His subjects were not only mythological and heroic; he painted portraits and athletes, and was known also for his obscene pictures,²⁷² perhaps of the sort to which Hippolytos owed his scant knowledge of women.²⁷³ Fifth-century painters competed with one another at festivals with works which may have been intended for civic decoration,²⁷⁴ like the large pinakes sometimes commissioned by temple treasurers;²⁷⁵ but there were also private collections famous in antiquity.²⁷⁶ The pinakes in our list give evidence that this taste for pictures had already been highly developed among Athenian citizens at the close of the Periclean age.

The problem with our entries is to know what the modifying adjectives mean. An unknown number of pinakes are described as *gegrammenos* (VII, 59), one is said to

²⁶⁵ *Technologie*, IV, p. 331.

²⁶⁶ *Jahreshefte*, VIII, 1905, p. 41.

²⁶⁷ See Rouse, *Greek Votive Offerings*, Cambridge, 1902, p. 174.

²⁶⁸ Athenaeus, XII, 534 d.

²⁶⁹ Athenaeus says Aglaophon, but it is very doubtful that he lived so long, and since Plutarch (*Alc.*, 16) reports that the second picture was by Aristophon, it is probable that the son's name should be substituted for that of the father in Athenaeus' account. See Gulick *ad* Athenaeus, XII, 534 d, and O. Rossbach, *R.E.*, s.v. *Aglaophon* and *Aristophon*.

²⁷⁰ Pliny, *H.N.*, XXXV, 138.

²⁷¹ *Ibid.*, XXXV, 70.

²⁷² *Ibid.*, XXXV, 67 ff.; cf. Plutarch, *De poet. aud.*, 18b. See also Lippold, *R.E.*, s.v. *Parrasios*; Pfuhl, *Malerei und Zeichnung*, II, pp. 689 ff. and 732.

²⁷³ Euripides, *Hippolytos*, 1005.

²⁷⁴ Athenaeus, XII, 543 e.

²⁷⁵ For example, *I.G.*, XI, 2, 158, lines 67 ff.; XI, 2, 161, line 75.

²⁷⁶ Plutarch, *Arat.*, 12.

be *smikros gegrammenos* (VII, 60-61), and one is called *poikilos* (VII, 62). Anything with lettering, drawing, or painting could be referred to as *gegrammenos*,²⁷⁷ while *poikilos* definitely suggests the use of paint of various colors.²⁷⁸ Painted pinakes were ordinarily done in tempera on pieces of wood, stone, or terracotta, which had been covered first with white paint or chalk.²⁷⁹ There was a second method of coloring a pinax called *enkausis*, by which heated wax color was applied to a plaque of wood or ivory.²⁸⁰ Since such a pinax was generally signed *ὁ δέινα ἐνέκασεν*, it seems unlikely that the term *gegrammenos* would be applied; thus it is possible that the pinakes first mentioned in our list were painted in tempera, and that the one labelled *poikilos* was done in encaustic.

Pollux (X, 84) reported the pinax *poikilos* as being *ἀπ' ὀροφῆς*; apparently this phrase comes from the *Skeuographikon* of Eratosthenes,²⁸¹ representing the opinion of a fourth-century antiquarian as to the kind of painted board this was. According to Eratosthenes it was a panel to be fixed to a decorated ceiling, but Pliny²⁸² later asserted that Pausias of Sikyon, a fourth-century painter, was the first to introduce the practice of painting panels (*lacunaria*). Either Eratosthenes was reading a practice of his own day back into the Attic Stelai, or else Pliny was too precise in his attempt to name the inventor of the technique. One painted Greek ceiling panel, of marble, has been found, in the Lycian Nereid monument;²⁸³ it is usually dated around 400 B.C.,²⁸⁴ although J. Six has attempted to prove a date in the mid-fourth century.²⁸⁵ Whatever date is chosen, both the style and the provenance of the Nereid panel suggest that it was not from one of the very earliest decorated ceilings, but comes rather from a time when the fashion was already widespread. Thus there is no reason to discard the informed opinion of Eratosthenes; Pliny probably meant that Pausias was the best known Greek painter of ceiling plaques. However, the private house from which the pinax *poikilos* came must have been one of the first in Athens to boast of

²⁷⁷ Pliny, *H.N.*, XXXV, 68, mentions the existence of sketches or drawings (*graphides*) by Parrhasios, some on panels and some on parchment.

²⁷⁸ For a discussion of the meaning of *poikilos*, see A. J. B. Wace, *A.J.A.*, LII, 1948, p. 54.

²⁷⁹ See *I.G.*, XI, 2, 161, line 76: *λευκώσαντι τὸν πίνακα ἀμφοτέρωθεν* Ht. Cf. *I.G.*, I², 66, line 31; II², 1237, line 62. There is a description of painted pinakes found near Sikyon in *J.H.S.*, LV, 1935, pp. 153-154.

²⁸⁰ For the technique of encaustic painting, see Elizabeth Dow, *Technical Studies*, V, 1936-37, pp. 3-17; Blümner, *Technologie*, IV, pp. 442 ff.; Pliny, *H.N.*, XXXV, 122. A third sort of pinax is found in the Delian lists of the second century B.C., the *πίναξ ἐμβλητέος*, evidently done in mosaic (*Insc. Délos*, 1403 B b II, line 18), but there is no evidence for the existence of mosaic pinakes in fifth-century private homes.

²⁸¹ See below, Pippin, p. 323.

²⁸² *H.N.*, XXXV, 123.

²⁸³ *Brit. Mus. Cat.*, Greek Sculpture, II, no. 934.

²⁸⁴ I note that there is a 1952 Columbia University dissertation by C. Gottlieb, *The Restoration of the "Nereid" Monument at Xanthos*, which is not available to me.

²⁸⁵ *Jahrbuch*, XX, 1905, pp. 155 ff.

this new form of decoration which was invented for use in public buildings. If we take the pinax poikilos as a *lacunarium*, then the conjecture that it was done in encaustic is strengthened, for this was the medium associated with Pausias.²⁸⁶ The Nereid plaque is only about seven inches square, and shows a full-face drawing of a woman. Six²⁸⁷ supposes that other lacunaria were similar to coin types, with heads also shown in three-quarters or profile, and hands holding objects of iconographical significance. Pausias was famous also for his paintings of boys, and there may have been Erotes, on round or rectangular plaques, among the ceiling pinakes painted for private houses.²⁸⁸

Votive pictures were often equipped with doors which could be closed over the painted surface,²⁸⁹ and purely decorative pictures protected in this way can be seen in the wall paintings at Pompeii.²⁹⁰ This was evidently a late development, however, and none of our pinakes is said to be *tethyromenos*. We can assume that the plaques listed in the Attic Stelai were of wood, since the material of the ground is not specified.

Price. An unknown number of pictures called *gegrammenos* was sold for 60 drachmas (VII, 59); the one which was *smikros gegrammenos* brought 6 drachmas 4 obols (VII, 60-61), and the *pinax poikilos* sold for an amount which was more than 5 and less than 10 drachmas (VII, 62). Pinakes ordered for the temple buildings at Delos varied in price from 12 to 100 drachmas,²⁹¹ but some of these were probably much larger than anything which would hang in a private house. As time passed, paintings became even more popular and more valuable; they were a suitable gift for Aratos to send to the King of Egypt,²⁹² and an *Archigallus* by Parrhasios, valued at 6 million sesterces, was one of Tiberius' favorite treasures.²⁹³

8. *προσκεφάλαιον* (II, 216-217). Pillow, cushion for the head. There are several passages in which the word *proskephalaion* occurs in a context in which reference is clearly made to a cushion for the head: Aristophanes, *Plutus*, 542; Plutarch, *Moralia*, 59C; and Sextus Empiricus, *M.*, 267. On the other hand, at the beginning of Plato's *Republic* (328 c), Kephalos is seated on a sort of *proskephalaion* and stool.

²⁸⁶ Pliny, *H.N.*, XXV, 122.

²⁸⁷ *Op. cit.*, p. 158.

²⁸⁸ Pausanias, II, 27, 3; Hesychius, *s.v.* Ἐγκοῦράδες and Κοῦράς.

²⁸⁹ For instance, *Insc. Délos*, 1403, Bb II, line 30; 1414 b I, line 21. See René Vallois, "Les ΠΙΝΑΚΕΣ déliens," *Mélanges Holleaux*, Paris, 1913, pp. 289 ff.

²⁹⁰ Van Buren, *Mem. of Amer. Acad. in Rome*, XV, 1938, pl. 6, fig. 3; pl. 7, figs. 1 and 2; Daremberg-Saglio, *Dictionnaire, s.v. Pictura*, figs. 5651, 5652. For a recent popular discussion of painted tablets from Herculaneum, see A. Maiuri, *Roman Painting*, Geneva, Albert Skira, 1953, p. 105.

²⁹¹ *I.G.*, XI, 2, 158, lines 67 ff.; 161, line 75.

²⁹² Plutarch, *Arat.*, 12.

²⁹³ Pliny, *H.N.*, XXXV, 70. The figure has been questioned, and 60,000 sesterces and 1 million sesterces have been suggested instead; see Lippold, *R.E.*, *s.v. Parrasios*, 1876.

Pollux (X, 40) refers to a passage in Kratinos (frag. 269: Kock, *C.A.F.*, I, p. 93) where reference is made to the cushion on the rower's bench.²⁹⁴ Saglio had discussed the word in Daremberg-Saglio, *s.v. Cervical*. I have found no corresponding article in the *R.E.*, although the word is mentioned by Herzog-Hauser, *s.v. Torus*.

Pollux specifically states (X, 40) that wool, leather, and linen *proskephalaia* were sold from the property of Alkibiades, and Stele II preserves the entry for seven leather ones. A reference to linen cushions in the Delian accounts is noted by Deonna (*Délos*, XVIII, p. 263, note 14). *Proskephalaia* were stuffed with feathers, wool, cotton, rabbits' hair, or similar material.²⁹⁵ With regard to color, Gow states (*ad Theokritos* 15, 3): "Hermippus (fr. 63, 23) mentions *ποικίλα προσκεφάλαια* from Carthage, and on Attic vases the cushions are often of striped pattern; and the rugs and cushions are so painted on a stone couch at Vathia (*Ath. Mitt.*, 26, T. 17)."

Prices. In the Edict of Diocletian, *proskephalaia* were not priced separately, but were listed with mattresses (*tyle*). The maximum price for the two together varied from 250 to 2,750 denarii.²⁹⁶ The more expensive ones were presumably of linen; for they are mentioned as coming from places which were noted for linen textiles.²⁹⁷ For prices of pillows in Egypt, see A. C. Johnson, "Roman Egypt," *Economic Survey*, II, p. 473.

9. *ψίαθος* (I, 108; II, 220). Rush-mat. The etymology of the word is obscure; Boisacq, *Dictionnaire*⁴, p. 1077. Special articles are those of Pottier in Daremberg-Saglio, *s.v. Matta*, and of Hug in *R.E.*, *s.v. Matta*. The *psiathos* might be made of papyrus²⁹⁸ or of palm-leaves.²⁹⁹ Athenaeus, citing Antigonos of Karystos, says that either a *psiathos* or a sheepskin was provided on a *kline*,³⁰⁰ depending on whether it was summer or winter. It might be used as a mattress and a bed,³⁰¹ but this usage was not inherent in the word. Thus Pollux (VI, 11) needs to specify one particular *psiathos*, that for sleeping, as a *chameunia*. The mat in Theophrastos, *H.P.*, IX, 4, 4, was clearly not used for sleeping.

²⁹⁴ For the same meaning, see Hesychius, *s.v. πανικτόν*. Cf. Pollux, VI, 9, and Gow *ad Theokritos*, 15, 3.

²⁹⁵ See Blümner, *Technologie*, I², p. 217.

²⁹⁶ Col. XXVIII, 46-55.

²⁹⁷ Cf. Broughton, "Roman Asia Minor," *Economic Survey*, IV, p. 616.

²⁹⁸ Theophrastos, *H.P.*, IV, 8, 4.

²⁹⁹ Theophrastos, *H.P.*, IX, 4, 4.

³⁰⁰ X, 420 a.

³⁰¹ Aristophanes, *Lys.*, 921; Aristotle, *H.A.*, VI, 559 b; Plutarch, *Mor.*, 236 b, where the point is that it is a very mean way to sleep; schol. *ad* Aristophanes, *Ranae*, 567. Cf. Ransom (*Couches and Beds*, p. 110) who defines the word as a 'rush mat to throw over a bed.'

IV. LIVESTOCK AND BEEHIVES

For a description of the nature and habitat of animals, reference has been made to O. Keller's standard work, *Die antike Tierwelt*, I and II, Leipzig, 1909, 1913; and to individual articles in Pauly-Wissowa, *R.E.* For the prices of animals in Greece in the fourth and third centuries B.C., the most convenient table is that of A. Segrè, *Circolazione monetaria e prezzi nel mondo antico*, Rome, 1922, pp. 168-169.

The entries for livestock in our inscriptions are found in one column of Stele VI. The prices in each case are only partially preserved; the left part of the column of the sales price is lost. Determination of the number of letter spaces occupied by the numerals of the sales prices becomes critical for establishing the price of cattle, and likewise of wine. The column in question can be seen in the photograph in *Hesperia*, VIII, 1939, p. 70. The present writer in Part I followed the alignment given in Meritt's text in *Hesperia*, VIII, pp. 72-73. This text shows the first numerals of all the sales prices of the column in vertical alignment with the exception of that in line 86 (Meritt's 37), which was shifted one space to the left although the sales tax in this line was correctly aligned. It clearly seems preferable to adopt a pattern which would yield the greatest regularity.

1. βούς (VI, 68, 69, 70). *Bous* is a generic word for the bovine species. In the singular, the word is used for ox or cow; in the plural it is equivalent to cattle.¹ In Greece, the most famous cattle came from the north, from Epirus and Thessaly,² but Euboea and Boeotia were also cattle producers and served as a source of supply for Attica, where there was a lack of pasture land. In 329 B.C. Eudemos of Plataea had to import into Athens a thousand pair of animals to provide for construction work on the Stadium.³

In Plutarch, *Solon*, XXIII, 3, the price of an ox in the time of Solon is given as five drachmas. The information is said to have come from Demetrios of Phaleron. Plutarch speaks of these prices as low in comparison with contemporary prices. In 410/9 B.C., 5114 drachmas were given for a hekatomb.⁴ The price of one cow,⁵ if the

¹ See Buck, *Dictionary*, p. 152.

² Arrian, *Anab.*, II, 16, 6; Aristotle, *H.A.*, III, 16; Varro, *R.R.*, II, 5, 10. See H. Kraemer, *R.E.*, s.v. *Rind* (Suppl. 7), 1166-67; and Keller, *op. cit.*, I, pp. 332 ff.

³ *I.G.*, II², 351, lines 18-19. Cf. Tod, *Gr. Hist. Inscr.*, II, p. 279.

⁴ *I.G.*, I², 304 A, line 7.

⁵ I have assumed that since the offering was to Athena, the hekatomb would naturally consist of cows. It should be noted that A. Mommsen, *Feste der Stadt Athen im Altertum*, Leipzig, 1898, p. 118, note 1, does not accept this view. His references prove that male animals were at times sacrificed to female divinities, and *vice versa* (cf. also *I.G.*, II², 1358, where rams are prescribed for Achaia, Kora, and Ge). However, the hekatomb to Athena seems to have consisted of cows; see *I.G.*, II², 334, line 19, a decree concerning the Panathenaea: οἱ ἱεροποιοὶ ---- θυόντων ταύτας τὰς βούς ἀπάσας ἐπὶ τῶν βωμῶν τῆς Ἀθηνᾶς ----. Cf. *I.G.*, II², 1006, lines 14-15. This is the view of P.

hekatomb totalled 100, would be about 51 drachmas. Since the hekatomb was for the Great Panathenaea it is generally thought that it amounted to the full complement of 100 animals.⁶ Another hekatomb, this of 109 oxen, cost 8,419 drachmas, which would make an average of 77.14 drachmas apiece.⁷ In this case, it is to be noted, the price is not dependent on the interpretation of the word 'hekatomb.'⁸ These animals were purchased for sacrifice at the festival of Apollo at Delos in 375/4 B.C. In 335/4 (*I.G.*, II², 334, line 16) a hekatomb for the lesser Panathenaea cost 4100 drachmas, which would be 41 drachmas apiece if the hekatomb consisted of 100 animals. Ziehen, however, believes the hekatomb was now of smaller number and suggests 50 animals,⁹ which would make each animal cost 82 drachmas. The estimate, however, has no probative value.

In an Athenian sacrificial calendar, dated shortly after 403/2 B.C.,¹⁰ two oxen are priced at 50 drachmas, but the low price may be explained by the qualifying adjective *λειπογνώμων*, 'lacking the teeth which mark age.'¹¹ In *I.G.*, II², 1358, a sacrificial calendar from the Attic Epakria of the period 400-350 B.C., the price of a bous is eight times given as 90 drachmas, once as 150 drachmas. Of the eight, one fee was for a pregnant cow. Since the sacrifices were to both female and male deities, the price of 90 drachmas was for a cow or ox.¹² The reading of 150 drachmas is in doubt. Moreover, the stone was subjected to erasure in the letter spaces immediately following (col. II, line 8). In the Agora inscription from 363/2 B.C., which contains a covenant between the two branches of the clan of the Salaminioi, the price to be paid for a bous is given as 70 drachmas.¹³ In *I.G.*, II², 1672, line 290, the price of a single sacrificial bous is given as 400 drachmas. This was apparently not normal, for the demos had in this case expressly established the price (*ὅσον ὁ δῆμος ἔταξεν*). The well-known famine of the period 330-326 B.C. doubtless caused a sharp rise in prices. This figure of 400 drachmas, in any case, cannot be regarded as normal. In a sacrificial calendar from Cos, dated *ca.* 300 B.C., the price to be paid for a cow is given as no less than 50 drachmas.¹⁴ In a still later sacrificial inscription, this from Olbia, the price of a cow is given as 1200, but the coin is not specified.¹⁵

Stengel, *Die griechischen Kultusaltertumer*, 3rd edition, Munich, 1920, p. 153. On the sex of sacrificial animals, see also W. K. C. Guthrie, *The Greeks and their Gods*, Boston, 1951, p. 221.

⁶ See L. Ziehen, *Rh. Mus.*, LI, 1896, p. 217.

⁷ *I.G.*, II², 1635, lines 35-36.

⁸ For various numbers of animals in a hekatomb, see P. Stengel, *R.E.*, s.v. ἑκατόμβη; also Kirchner *ad Syll.*³, 271, note 7; and *Syll.*³, 1024, line 29.

⁹ L. Ziehen, *Leges Graecorum Sacrae*, II: 1, p. 95, note 22.

¹⁰ J. Oliver, *Hesperia*, IV, 1935, p. 21, lines 48-51.

¹¹ Pollux, I, 182.

¹² Cf. R. B. Richardson, *A.J.A.*, X, 1895, p. 225.

¹³ W. S. Ferguson, *Hesperia*, VII, 1938, p. 5, line 86.

¹⁴ *Syll.*³, 1026, lines 6-7.

¹⁵ *Syll.*³, 1039. Ziehen (*Leges Graecorum*, p. 249) regards it as an obol; E. H. Minns (*Scythians and Greeks*, Cambridge, 1913, p. 463) as a *chalkous*.

Prices from Delos include two work-bulls for 75 drachmas each¹⁶ and a young bull for 50 drachmas in 274 B.C.¹⁷ Larsen notes that the 50 drachmas is the lowest price for cattle known from Delos. Other Delian prices of the period 190-169 vary from 70 to 120 drachmas.¹⁸ In a decree of the Amphictions at Delphi in 380/79, the so-called hero-bull was priced at 100 Aeginetan staters.¹⁹ For a similar prize animal Jason of Pherai offered a golden crown.²⁰ In *I.G.*, II², 2311 (400-350 B.C.), lines 71-81, cattle are listed among the *νικητήρια* and the figure of 100 drachmas seems to give the value of the animal.

Numerous other prices for cattle are preserved, all of which indicate considerable fluctuation. "The value of cows varies in the sources from 8 to 30 denarii in Babylonia, from 15 to 100 denarii in Egypt and from 100 to 200 denarii in Palestine."²¹ Prices for oxen were higher.

Our Stele VI, lines 68-70, contains the following three entries:

--	.	βόη ἐρ[γάτα δ]ύο ἐν Ἀρ[--]
--	.ΔΔ	βόη δύ[ο]
--	β[όε]ς τέτταρες καὶ μό[σχοι τούτου].

The number of uninscribed spaces in the columns of prices is given according to Meritt, *Hesperia*, VIII, 1939, p. 72.²² The price of the two working oxen in the first entry could presumably be 50 or 100 drachmas; for the two cows or oxen in the second entry, 70 or 120 drachmas. In 410/09 B.C., we have seen above, the price of a sacrificial cow was apparently 51 drachmas. Since the temples required only perfect animals with the duty of selection delegated to a special board of hieropoioi, this price of 51 drachmas should be regarded as a maximum for our inscription. I would suggest, accordingly, the restoration of the 100 drachma sign in line 68 and the 50 drachma sign in the missing letter space of line 69. The working oxen would then be worth 50 drachmas apiece; the cow (or, less likely, ox) of line 69, 35 drachmas.

The price of cattle would not seem to be overly high, considering the size of the animal. This supposition is in contrast to the general conception that beef was very expensive. To demonstrate the high cost of beef, Michell, *Ec. of Anc. Greece*, p. 62, note 1, cites a passage in Athenaeus (IX, 377 a) which speaks of the roasting of a whole ox at a feast in a rich household and a passage in Theophrastos (*Char.*, XXI, 7) where the scalp of an ox is nailed above the door for everyone to see. But the

¹⁶ *I.G.*, XI, 2, no. 142, line 11.

¹⁷ *I.G.*, XI, 2, no. 199A, lines 70-71. Cf. Segrè, *op. cit.*, pp. 168-169.

¹⁸ J. A. O. Larsen, "Roman Greece," *Economic Survey*, IV, p. 387.

¹⁹ *I.G.*, II², 1126, line 32.

²⁰ Xenophon, *H.G.*, VI, 4, 29.

²¹ F. M. Heichelheim, "Roman Syria," *Economic Survey*, IV, p. 155. Cf. A. C. Johnson, "Roman Egypt," *Economic Survey*, II, p. 232.

²² This requires a slight correction in line 68 of our Stele VI.

exceptional feature is that the roasted animals were large and whole.²³ This appears clearly from several passages in Athenaeus. In IV, 144 a, Athenaeus cites Herodotos, I, 133, where the latter speaks of the poor as setting out small animals, the rich large animals such as a cow, a horse or a camel. Similarly, Athenaeus IV, 130 e-f. In IV, 148 e, beef ribs are named among the foods served by the stingy, and in several passages (I, 25 e; II, 63 d-e; III, 96 b), beef is mentioned along with other meats without exceptional comment. It was doubtless true, as Antiphanes, the comic poet, once said,²⁴ that the Greeks were leaf-chewing (*phyllostrogos*), and scant of table (*mikrotrapcoi*), but in comparison with other meats, beef does not seem to have been costly. In the Edict of Diocletian, the price of beef per pound is less than those for pork or lamb and the same as that for goat.²⁵

2. αἶξ (VI, 73). Goat. References to the ubiquitous goat are surprisingly few in an economic context, but it is hard to believe that goats were less common in ancient than in modern times.²⁶

In the fourth-century sacrificial calendar which was found near Marathon,²⁷ the price of the goat is given six times as 12 drachmas. In line 18 an all-black he-goat is valued at 15 drachmas. The price of goats in this inscription is identical with that of ewes for male divinities. In the inscription concerned with the cult of the Salaminioi (363/2 B.C.), the price to be paid for a goat is given as 10 drachmas.²⁸ In the well-known famine which affected Greece ca. 330 B.C., the price of a goat in an Eleusis inscription is given as 30 drachmas.²⁹ *Economic Survey* contains reference to only one fee for a goat—that at 80 drachmas in A.D. 22 in Egypt.³⁰

The only literary passage which relates to the price of goats is in Isaïos, XI, *Estate of Hagnias*, 41.³¹ One hundred head of goats, together with sixty sheep, a fine horse, and furniture, are estimated at 3000 drachmas (one-half talent). A riding horse was seriously valued at 1200 drachmas in Aristophanes.³² The furniture would presumably bring much less. If we allow the same price for the goats and sheep, the

²³ Aristophanes, *Ach.*, 85.

²⁴ Kock, *C.A.F.*, II, p. 81.

²⁵ Col. IV.

²⁶ See Larsen, *op. cit.*, p. 485. What I would hope would be the definitive article on the goat (Ziege) has not yet appeared in *R.E.*

²⁷ *I.G.*, II², 1358.

²⁸ W. S. Ferguson, *Hesperia*, VII, 1938, p. 5, line 85.

²⁹ *I.G.*, II², 1672, line 289 (329/8 B.C.). Ziehen (*Rh. Mus.*, LI, 1896, p. 215), however, suggests that these sacrificial victims had horns which were gilded and that the gilding was included in the price.

³⁰ II, p. 231. For one other price from Egypt, see Segrè, *op. cit.*, p. 132.

³¹ Cf. the more indefinite passage in Isaïos, VI, *Estate of Philoktemon*, 33.

³² Aristophanes, *Nubes*, 21; 1224. Cf. Ehrenberg, *People of Aristophanes*², p. 223; and Michell, *Ec. of Anc. Greece*, p. 66, note 1.

average price of the 160 head would be about 11 drachmas. This is only slightly below the average of prices for sheep and goats in the sacrificial tables published as *I.G.*, II², 1357. Sheep, including rams, would probably average a little more than goats.

In our Stele VI, line 73, the following entry occurs:

— — ... Δ αἴγες ϠΔΠΠ καὶ ἔγγον[α τοῦτον].

The number of numerals in the original sales price is that determined above, p. 255.

The most likely restoration for the price of the 67 goats and their kids would seem to be: [ϠHH]Δ (710 drachmas). The next larger figure would be [XΔΔ]Δ (1030 drachmas), the next lower one [ϠHΔ]Δ (620 drachmas). With the restoration of the figure for 710 drachmas, the price of the single goat, omitting the young, would be 10.6 drachmas apiece. This is not far from the price of 12 drachmas contained in the fourth-century sacrificial calendar, our closest parallel. The kids were numerous enough to receive mention; so the average per animal must have been under 10 drachmas.

3. πρόβατον (VI, 71). Sheep. In Attic, the word πρόβατον replaced οἷς, the regular word in Homer and most dialects, for 'sheep.'

According to Plutarch,³³ the price of a sheep under Solon was one drachma. By the time of Lysias,³⁴ a lamb to be offered in sacrifice brought 16 drachmas. The price of a small sheep, which had been selected for sacrifice, is given in Menander as 10 drachmas.³⁵ In [Demosthenes], XLVII, *Against Euergos and Mnesiboulos*, the contention is made that fifty fine-wool sheep together with the shepherd and a serving-boy were worth more than the fine of 1313 drachmas 2 obols.³⁶ Since no particular skill was involved in herding sheep, the two slaves might be roughly valued at 360 drachmas (180 drachmas x 2).³⁷ The value of the fifty sheep, then, would be 950 drachmas, or 19 drachmas for each. In a fragment of an Athenian sacrificial calendar, which Oliver, its editor, dates shortly after 403/2 B.C.,³⁸ sheep are valued at 12, 15, and 17 drachmas. The ewe (οἷς) sacrificed to a female divinity is priced at 12 drachmas, to a male divinity at 15 drachmas.³⁹ The ram (κρίος) is priced at 17 drachmas. Similarly, in the Salaminioi inscription of 363/2 B.C., the price of the ois is given six times: three (to male divinities) as 15 drachmas, three (to female divinities) as 12 drachmas.⁴⁰ In

³³ *Solon*, 23. Cf. Orth, *R.E.*, s.v. *Schaf*, 379.

³⁴ XXXII, *Against Diogeiton*, 21.

³⁵ Kock, *C.A.F.*, III, p. 91; F. Allinson, *Menander*, Loeb Classical Library, London, 1921, p. 402.

³⁶ 57 and 64.

³⁷ For the figure 180 drachmas, as about average for a slave, see below, pp. 276-278.

³⁸ *Hesperia*, IV, 1935, p. 21.

³⁹ Oliver (*ibid.*, p. 27) suggests the difference in price corresponds to a difference in the animals' ages.

⁴⁰ W. S. Ferguson, *Hesperia*, VII, 1938, p. 5, lines 85-93.

another sacred calendar, this from the Attic Epakria and dated in the first half of the fourth century (*I.G.*, II², 1358), the prices for sheep are given as 11, 12, 16 and 17 drachmas.⁴¹ Eleven drachmas was the price for the ewe to a female divinity, twelve drachmas for the ewe to a male divinity and for the ram. Sixteen and seventeen drachmas were the prices for sheep with young. The price of sacrificial sheep in the famine year 329/8 B.C. is given as 30 drachmas in an Eleusis inscription.⁴² Two years later (327/6 B.C.) in a similar Eleusis inscription, the price of a sacrificial sheep (ois) is twice given as 12 drachmas; the price of a ram (*krios*) for Kore as 17 drachmas.⁴³ In a sacrificial list from Delos (*ca.* 200 B.C.),⁴⁴ the price of a lamb, specified as white and uncastrated, is given as 20 drachmas.

In Rome in the fourth and third centuries, sheep were early reckoned at one-tenth the price of oxen, or at six denarii.⁴⁵ For much later prices in Egypt where the average was about 18 drachmas for sheep, see A. C. Johnson, *Economic Survey*, II, pp. 231-232.⁴⁶

4. *μόσχος* (VI, 70). Calf. The number of calves belonging to the four cattle (Stele VI, line 70) is not known. The line may well be completed with the restoration *μό[σχοι τούτων]*.

5. *σμήνος* (VI, 66). Beehives. Solon specified that beehives of one proprietor must be at least 300 feet away from those of another,⁴⁷ and we may assume from this prescription that beekeeping was a widespread industry in Attica at a time when Mount Hymettos was covered with thyme. According to one estimate there were in the fifth century twenty thousand stocks of bees in Attica.⁴⁸

Sir George Wheler (*A Journey into Greece*, London, 1682, p. 412) in the seventeenth century described the Athenian beehive as made of wicker, with combs which were built down from bars placed across the top, and this type was normal in Greece up to World War II. It may well have resembled the ancient type. Aristotle knew a beehive of which the interior could be seen, for he watched the ruler, the development of the brood, and the feeding of the grubs, and it has been noted that the type of hive described by Wheler would have permitted such observations.⁴⁹

⁴¹ Cf. Segrè, *op. cit.*, pp. 168-169.

⁴² *I.G.*, II², 1672, line 289. See above, p. 258.

⁴³ *I.G.*, II², 1673, line 62.

⁴⁴ *Syll.*³, 1024, line 9.

⁴⁵ *Economic Survey*, I, pp. 47-48.

⁴⁶ For prices in Roman Syria, see Heichelheim, *Economic Survey*, IV, p. 155.

⁴⁷ Plutarch, *Solon*, XXIII.

⁴⁸ A. Gmelin, in J. Witzgall's *Das Buch von der Biene*, Stuttgart, 1898, p. 21. One beehive would produce one to two and a half choes of honey at one harvesting. For taxes on beehives, see Andreades, *Hist. of Gr. Pub. Finance*, I, p. 157; and Rostovtzeff, *Soc. and Ec. Hist. of Hell. World*, III, pp. 1386-1387, note 99.

⁴⁹ See H. M. Fraser, *Beekeeping in Antiquity*, 2nd edition, London, 1951, p. 17.

Columella, who devotes chapter 6 of Book IX of the *De Re Rustica* to the hive, states that the best were made of cork or reeds, and quotes Celsus as disapproving of hives made of cow-dung.⁵⁰

For bibliography on the subject of beehives, see Olck in *R.E.*, s.v. *Bienenzucht*, and Klek in Suppl. 4 of *R.E.* under the same word.⁵¹

At the beginning of the fourth century B.C., the price of a kotyle of honey was several times given as three obols. The prices occur in *I.G.*, II², 1356, a sacred law which set the tariff relating to sacrifices. For other prices, see, e. g., A. Böckh, *Staats-haushaltung der Athener*³, I, p. 132. The various indexes in the *Economic Survey* contain no references to the prices of beehives or to honey, although bees must have been kept wherever possible to produce the honey needed in an otherwise almost sugarless world, and their wax was a valuable by-product. The maximum price of honey is given in the Edict of Diocletian as 24 to 40 denarii an Italian pint (sexte; 0.547 liter);⁵² for Phoenician (i. e., date) honey, 9 denarii.⁵³

V. REAL PROPERTY

TYPES OF PROPERTY

In our lists, there are eleven distinct types of 'real property' which were sold by the poletai: ¹ ἀγρός, γῆ ψιλή, γῆπεδον, δρυινών, κῆπος, οἰκία, οἰκόπεδον, ὀργάς, πιτυινών, συνοικία, and χωρίον. Only five of these terms (*kepos*, *oikia*, *oikopedon*, *synoikia*, and *chorion*) occur in the Greek horoi most recently re-edited by Fine and Finley in virtually simultaneous publications. This may seem surprising in view of the fact that more than two hundred of these horoi have now been published.² On the other hand, five terms which appear on the preserved horoi (ἐδάφη, ἐργαστήριον, κάμινος, καπηλείον, and οἴκημα) do not occur in our fragmentary lists. One of our terms (*kepos*) is largely restoration;³ another (*pityinon*) rests on the early transcription of the text by Pittakys.⁴ Finley has promised a study of the vocabulary of property terms in Greek

⁵⁰ Fraser, *op. cit.*, p. 54, refers to hives of wicker cloomed with cow-dung found in Spain today.

⁵¹ The series of articles by J. Klek and L. Armbruster, "Die Bienenkunde des Altertums" in the *Archiv für Bienenkunde* (1919-26) was not available to me.

⁵² Col. III, lines 10-11. A list of those places in Asia Minor which were known for beekeeping is given by T. R. S. Broughton in *Economic Survey*, IV, p. 620.

⁵³ Line 12.

¹ M. I. Finley (*Studies in Land and Credit in Ancient Athens, 500-200 B.C.*, New Brunswick, 1951, p. 54) has shown that there was no word in the Greek language meaning 'real property.' Note also the remarks of Buck on 'landed property' in *Dictionary*, p. 769. The term 'real property' is here used in its modern content.

² John V. A. Fine, *Horoi, Studies in Mortgage, Real Security and Land Tenure in Ancient Athens (Hesperia, Supplement IX)*, Baltimore, 1951, p. 43, states the number is about 214.

³ X, 17.

⁴ X, 1.

authors; ⁵ in the meantime, the following remarks are offered concerning the meaning of the terms occurring in our lists. The specific meanings which these words seem to bear in the Attic Stelai are given on p. 269.

1. *ἀγρός* (VI, 55; VII, 74). This word is frequently used in the literature in antithesis with *πόλις* or *ἄστυ*. In the *Odyssey*: "Your father abides here in the country (*ἀγρῷ*) and goes not down to the city."⁶ Similarly, in Plato, *Lg.*, IX, 881 c: "— — — if the assault occur in the city — — — the punishment shall be inflicted by the *astynomoi*; and if it occur *κατ' ἀγροὺς τῆς χώρας*, by the officers of the *agronomoi*." In Lysias, XXXI, *Against Philon*, 8: "This man was banned from the city — — — and for a time he lived *ἐν ἀγρῷ*." In [Demosthenes], XLVII, *Against Euergos and Mnesiboulos*, 63: "— — — went at once from the city *εἰς ἀγρόν*." In several places in Lysias, I, *On the Murder of Eratosthenes*, the speaker uses *agros* in the sense of 'country.'⁷

The word seems to be used, however, not only for the general sense of 'country,' but for a field or farm which was in the country. So [Demosthenes], LIII, *Against Nikostratos*, 6: "Three slaves ran away from him from his farm (*ἐξ ἀγροῦ*)."⁸ In Isaios, VI, *Estate of Philoktemon*, 33: "— — — he sold *ἀγρόν* at Athmonon for seventy-five minas to Antiphanes"; and VIII, *Estate of Kiron*, 35: "the property of Kiron consisted of *ἀγρόν* at Phyla easily worth a talent — — —"; and in XI, *Estate of Hagnias*, 42, the speaker states that the real property of Stratokles was divided into houses and *ὁ ἀγρός* worth 12 minae. In Thucydides, II, 13, 1: "Pericles — — — conceived a suspicion that perhaps Archidamos might pass by *τοὺς ἀγροὺς αὐτοῦ* and not lay them waste."⁹ Buck classifies *ἀγρός* under the general heading of 'agriculture' and under the sub-heading of 'field for cultivation.'⁹

In our list, it is to be noted that a house may be situated on an *agros*,¹⁰ and the *agros*, in turn, may be described as containing so many *plethra* of land.¹¹ The meaning of the word, then, would here seem to be 'farm' or a 'field for cultivation' in the country.¹²

⁵ *Op. cit.*, p. 246, note 9.

⁶ XI, 187-188: *πατήρ δὲ σὺς αὐτόθι μίμνει
ἀγρῷ, οὐδὲ πόλινδε κατέρχεται.*

⁷ 11, 13, 20, 22, 39.

⁸ J. E. Powell in his *Lexicon to Herodotus*, Cambridge, 1938, p. 3, defines *ἀγροί* in I, 17², as the cultivated land of a city, but the reference is clearly to country dwellings in the Milesian territory.

⁹ *Op. cit.*, p. 489. Buck notes that Greek *agros* like Latin *ager* is often used in a wider sense for 'open country' vs. 'town.' On page 1304, Buck indicates that it is the plural *ἀγροί* (but also singular in Homer) which is particularly used in the sense of 'country.'

¹⁰ VII, 73, 77.

¹¹ VII, 74.

¹² The word occurs in an Ionian inscription of Erythrai (*Athena*, XX, 1908, pp. 167-169) where Van Herwerden (*Lexicon Graccum*, Leyden, 1910, s.v.) translates it as 'cultus,' and Liddell-Scott-Jones as 'tilled land.'

2. γῆ ψιλὴ (VII, 72, 74). Cultivated land was divided into two types: ψιλὴ and πεφυτευμένη.¹³ *Psile* land was that which was without trees.¹⁴ The *Et. Mag.* contains the definition: ψιλὴν ἄρουραν τὴν ἄδενδρον χώραν, τὴν πρὸς τὸ σπείρεσθαι καὶ ἀροῦσθαι ἐπιτηδείαν;¹⁵ Liddell-Scott-Jones defines as follows: 'the tillage of land for corn and the like, opp. γ. πεφυτευμένη (the tillage of it for vines, olives, etc.).' The term *psile* has generally been understood as applying solely to land cultivated for cereals, or cornland.¹⁶ The text of Stele VII, 72 (γῆς ψιλῆς πλέθρα . . . ἀμπέλων) shows, however, that the tillage of land for vines was called *ge psile*; so current definitions must be corrected to read 'the tillage of land for cereals and vines';¹⁷ whereas land πεφυτευμένη means the tillage of it for fruit and olive trees.¹⁸

3. γήπεδον (IV, 8; VII, 23, 25). *Gepedon* is not a common word. It does not occur in the various indices of the Attic Orators. The Ionic form γεώπεδον occurs in Herodotos, VII, 28, where Liddell-Scott-Jones gives it the meaning 'portion or plot of ground, garden, esp. within a town.' The passage in Herodotos contains a speech of Pythios wherein he explains his offer of wealth to Xerxes and concludes, "there is sufficient livelihood to me from my slaves and land (geopeda)." The geopeda were, then, cultivated lands in Lydia;¹⁹ there is no connotation of land within towns. The definition in Liddell-Scott-Jones possibly arises from passages in Phrynichos and Eustathius where γήπεδα is defined as land, such as gardens, adjacent to city houses.²⁰ But in our list, the word clearly refers to land in an inland trittys.²¹ *Gepedon* occurs in one passage each in Plato and Aristotle.²² In the former²³ the word refers to the home lot which one son of each of the 5,040 landholders of the state was to inherit.

¹³ Aristotle, *Pol.*, 1258b, 18, and Demosthenes, XX, *Against Leptines*, 115. For γῆ, the root meaning of which seems to have been 'earth's surface, ground,' see Buck, *op. cit.*, pp. 15-17. Cf. also Kent's note on the meaning of this word in Delian accounts (*Hesperia*, XVII, 1948, p. 257, note 38).

¹⁴ Herodotos, IV, 19 and 21.

¹⁵ 818, 38.

¹⁶ See Caillemer in Daremberg-Saglio, *Dictionnaire*, I, 720 b, and E. Barker, *Politics of Aristotle*, Oxford, 1948, p. 30. We may note that in M. Fraenkel, *Inschriften von Pergamon*, I, Berlin, 1890, no. 158, a vineyard and a designated number of plethra of *ge psile* are listed separately. For similar examples, see A. Wilhelm, "Neue Beiträge III" in *Sitzungsber. der k. Akad. der Wissenschaften in Wien*, Phil.-hist. Kl., 175, 1 Abh., 1913, pp. 6-7. Such examples may have given rise to the common definition of *ge psile* as 'grain land.' *Ge psile* would seem, however, to be a more general term for land lacking trees, which might or might not be a vineyard.

¹⁷ The stone is uninscribed after ἀμπέλων. In the Delian accounts of the second and third centuries B.C., the exact number of vines was recorded; see *I.G.*, XI, 2, 287 A, lines 155, 157; *Insc. Délos*, 356 bis, B, lines 27-29; etc.

¹⁸ See Lysias, VII, *On the Sacred Olive*, 7.

¹⁹ Cf. Powell, *Lexicon to Herodotus*, s.v.

²⁰ Eustathius: τὸ ἐν πόλει προκείμενον οἰκίας οἶον κηπίδιον. Cf. Bekker, I, p. 32, 1.

²¹ VII, 23-24.

²² See also *I.G.*, IV, 823, line 58.

²³ *Lg.*, V, 741c.

These lots were to remain inalienable. In Aristotle, the passage containing the word reads: "we may have a system under which plots-of-ground (gepeda) are owned in severalty, but the crops are brought into a common stock for the purpose of consumption."²⁴ In both cases, the word refers to division of the cultivated land of the state, and the *κηπίδιον* of Eustathius seems hardly an appropriate synonym. In our lists, it is to be noted that the gepeda are located in town and inland demes and that a gepedon may be divided into halves. The meaning seems to be 'plot of ground' or 'lot,' but on the basis of the limited evidence, the exact nature and limits of the term are not determinable.

4 and 9. *δρυινών* and *πιτυινών*. These words make their sole appearance in the Greek language in our Stele X (line 1). In the case of the second word three letters are restored, but the ending is clear and this or some analogous word seems required.²⁵ For the word-formation, reference may be made to Schwyzer, *Gr. Gram.*, I, p. 488, section 5. *Dryinon* is defined by Liddell-Scott-Jones as 'oak-coppice'; *pityinon* would be 'pine-coppice.' The words *δρῦς*, 'oak,' and *πίτυς*, 'pine,' were commonly paired.²⁶ For the extensive use of both types of wood in antiquity, reference may be made to Blümner, *Technologie*, II, pp. 260-261 and 283-285.

5. *κήπος* (X, 17). P. Roussel inferred from the use of the word at Delos that a *kepos* was an enclosed field which contained no buildings.²⁷ J. H. Kent in his admirable work on the Delian temple estates restudied the evidence and concluded that *kepos* referred to a 'plot of land under cultivation,' since the revenues from the kepoi-estates were derived from vines, grain, and fruit trees (arable land).²⁸ Non-epigraphical evidence shows that trees²⁹ and vegetables (*λάχανα*)³⁰ were grown in kepoi. The word corresponds, therefore, to English 'garden' and 'orchard.' Buck has written of *kepos* and its Indo-European cognates, "there may be specialization of 'garden' to 'flower garden,' 'vegetable garden,' or 'tree garden, orchard.'"³¹

²⁴ *Pol.*, 1263 a (Barker's translation).

²⁵ See *Hesperia*, XXII, 1953, pp. 290-291.

²⁶ See *Od.*, IX, 186; *Il.*, XIII, 389-390.

²⁷ *Délos, Colonie athénienne*, Bibliothèque des Écoles Françaises d'Athènes et de Rome, t. 111, Paris, 1916, p. 157, note 1.

²⁸ *Hesperia*, XVII, 1948, p. 318, note 240. In *I.G.*, XI, 2, 287, line 147, it is stated that a *ἱπνός* (Kent, *op. cit.*, p. 254, note 25: 'kiln'; Liddell-Scott-Jones: 'kitchen') was situated in a kepos.

²⁹ Plato, *Ep.*, II, 313 A, and Homer, *Od.*, IV, 737. The word *kepos* occurs only four times in the Attic Orators: [Demosthenes], XLVII, *Against Euergos*, 53; L, *Against Polykles*, 61; Isaios, V, *Estate of Dikaiogenes*, 11; and Hyperides, *Against Demosthenes*, fr. VII (Kenyon). See W. A. Goligher, *Hermathena*, LVII, 1941, p. 42.

³⁰ [Demosthenes], L, *Against Polykles*, 61 and Athenaeus, I, 7 c. See also the numerous references to *κήπον λαχανομένον* in papyri (F. Preisigke, *Woerterbuch der griechischen Papyruskunden*, I, Heidelberg, 1924, 793).

³¹ Buck, *Dictionary*, p. 490.

The word occurs only once in our Stelai (X, 17), where it is the group of letters which seem to accord best with the traces read by Pittakys.³² It is to be noted, however, that Pittakys himself restored ἀγρός and that the latter word has been coupled with χωρίον, as is the case in our entry, in Xenophon, *H.G.*, II, 4, 1.

6. οἰκία (IV, 6, 13, 20; VI, 13, 56, 76, 89, 94; VII, 23-24, 25-26, 73, 77; X, 1, 15, 17). *Oikia*, used in Homer for the nests of birds and bees³³ and occurring in tragedy only in one papyrus fragment,³⁴ is very common in Aristophanes and prose texts with the meanings of 'building, household, family,' etc.³⁵ In legal contexts, it seems to refer generally to a 'private residence.' Finley in his section on houses in the *horoi* has recently written, "an analysis of the economics of real security will show that, in all likelihood, it is the personal residence that is usually meant by the word 'house' in the *horoi*."³⁶

7. οἰκόπεδον (VI, 100). *Oikopedon*, a rare word, is found in one passage in Plato in a context which shows that a building is meant.³⁷ The word occurs once, too, in Thucydides, in connection with the fortifications of Delium (IV, 90): "They threw in grape-vines as well as stones and bricks from the neighboring *oikopeda* which they pulled down." E. Bétant translates the word as 'substructio,'³⁸ which receives support from the definitions of Phrynichos³⁹ and Photius,⁴⁰ but the use of πλίνθον and καθαίροντες indicates that neighboring buildings are meant.⁴¹ In Aristotle, *Pol.*, 1265b, 24, where Liddell-Scott-Jones incorrectly defines *oikopedon* as 'site of a house,' it is clear that buildings are meant.⁴² Aristotle here is criticizing passages in Plato's

³² See *Hesperia*, XXII, 1953, p. 291.

³³ *Il.*, XII, 168, 221; XVI, 261.

³⁴ Euripides, *Phaethon*, 204. It is also found as a variant reading for ἑστία in *Medea*, 1130.

³⁵ See Liddell-Scott-Jones, *s.v.* For the most detailed study of the word and its synonyms, see J. H. H. Schmidt, *Synonymik der griechischen Sprache*, II, Leipzig, 1878, pp. 508-526. Buck (*Dictionary*, p. 458) states concerning οἶκος, οἰκία and their Indo-European cognates, "In this group the notion of 'house' as a building is subordinate to that of 'home, settlement, family'."

³⁶ *Op. cit.*, p. 65. It is to be noted that in Delian inscriptions, *oikia* is the word used for houses situated in the city of Delos. In the records of the estates of the Temple of Apollo, only one estate had an *oikia*. The principal building on the estates was the *kleision*, which Kent (*op. cit.*, p. 298), who has collected the evidence, translates as 'farmhouse.'

³⁷ *Lg.*, V, 741c. See Liddell-Scott-Jones, *s.v.*; E. des Places' translation in the Budé series, *ad loc.*; and Finley, *op. cit.*, p. 253, note 50. The translation in the Loeb text of the *Leges* ('house-plot') is here incorrect. *Lg.*, V, 740a shows that Plato is making reference to the apportionment of land and houses.

³⁸ *Lexicon Thucydideum*, Geneva, 1843, *s.v.*

³⁹ See Bekker, *Anecd.*, I, p. 32, 2. Cf. the interesting comments of Andreades, *Hist. of Gr. Pub. Finance*, pp. 151-152, note 8.

⁴⁰ *Lexicon*, ed. S. A. Naber, II, Leiden, 1865, p. 5, οἰκόπεδον· ἔρημον κατάπτωμα οἴκου.

⁴¹ See Classen-Steup, *Thucydides*, *ad loc.*

⁴² So Barker, *op. cit.*, p. 59.

Lcges where two separate houses are allotted to each citizen.⁴³ Aischines, the only Attic orator in whose writings the word is preserved, writes: "He walled her up in an empty house — — — and to this day the *oikopeda* of that house stand in your city, and that place is called — — —." ⁴⁴ This reference might be to the substructure of the house, and be in accord with the definition preserved in Bekker and Photius (see above).

There are several non-Attic inscriptions in which *oikopeda* is used in connection with allotment or division of land.⁴⁵ We note one in particular, an inscription of Sardis,⁴⁶ where an *oikopedon* is referred to as requiring three artabas of seed. Here the word clearly refers to a plot of ground, although possibly one designed to be used for a dwelling.

Oikopeda occurs in several Egyptian papyrological sources in which the editors feel that the word is used interchangeably with *oikia* or *oikos*. This has been the conclusion of Kraemer and Lewis,⁴⁷ Boak,⁴⁸ and Youtie and Pearl.⁴⁹ Waiving the question of the significance of Egyptian usage for Attic meaning, it should be noted that proportionately the word here more commonly means 'building-site' or 'house-lot.' Thus, in the third volume of the Michigan papyri, where Boak has noted that the twice-used phrase *τόπων οἰκόπεδα* has to do with buildings, there are more than twenty examples of the use of *oikopeda* where the respective editors have translated the word as 'building-site' or the equivalent.⁵⁰ This includes two examples in Boak's document. In the Youtie-Pearl document, *oikopeda* refers to the entire parcel of a half share of a house with land. It would seem, then, that the specific meaning of the word must be determined from the context. It might refer to a building-site; at other times the site seems to have contained a building or at least the substructure of a building.

In our Stele, the word is qualified by two adjectives, *ἐλύ* and *χέρρον*.⁵¹ The latter means 'without a crop.'⁵² Concerning *ἐλύ* which occurs only here, Meritt has written, "the word *ἐλύ* is known only from Hesychius (where it is written *εἰλύ*) and supposedly means the same as *μέλαν*."⁵³ It may be supposed, on the other hand, that the word means 'swampy' and is to be connected with *ἔλος* or *ἰλύς*.⁵⁴ In any case, our

⁴³ *Lg.*, V, 745 e and VI, 776 a. See Jowett's commentary *ad Pol.*, 1265 b.

⁴⁴ I, 182. Cf. *I.G.*, II², 1672, line 75: τὰ οἰκόπεδα τῆς ἱερᾶς οἰκίας.

⁴⁵ See Dittenberger, *Syll.*³, no. 141, and A. Wilhelm, "Neue Beiträge, III" in *Sitzungsber. der k. Akad. der Wissenschaften in Wien*, Phil.-hist. Kl., 175, 1 Abh., 1913, pp. 11-12.

⁴⁶ W. H. Buckler and D. M. Robinson, *Sardis*, VII, Part 1, Leyden, 1932, no. 1.

⁴⁷ *T.A.P.A.*, LXVIII, 1937, p. 380.

⁴⁸ *Michigan Papyri*, III (ed. J. G. Winter), Ann Arbor, 1936, p. 215.

⁴⁹ *Michigan Papyri*, VI, Ann Arbor, 1944, p. 135.

⁵⁰ It is perhaps worth noting that the modern meaning of the word is 'building lot.'

⁵¹ VI, 100.

⁵² Cf. *I.G.*, II², 2492, line 16.

⁵³ *Hesperia*, VIII, 1939, p. 75.

⁵⁴ Cf. Liddell-Scott-Jones, *addenda*, p. 2068; and Buck and Petersen, *Reverse Index*, p. 747.

two terms can hardly be applied to architecture. The entry in our list, then, would seem best translated as 'house-site, swampy and without a crop.'⁵⁵

8. *ὄργας* (VI, 104). The word first appears in Euripides and occurs only once in the Attic orators.⁵⁶ It is used most often with *hiera* to designate 'uncultivated land sacred to the gods,' and, in particular, a tract of sacred land between Athens and Megara. In connection with a preserved Athenian decree of the year 352/1, the lexicographical evidence on *orgas*, including definitions from Harpokration and Photius, has been collected in Dittenberger, *Syll.*³, no. 204, note 2. Of the four occurrences of the word in Euripides three probably refer to holy ground⁵⁷ and Dodds has suggested that the word be translated 'mountain glades' rather than 'meadow-lands' (Liddell-Scott-Jones).⁵⁸ The fourth passage is in *Electra*, 1163: "Like as a mountain lioness, frequenting the thickets of orgades, she (Clytemnestra) wrought these deeds," where L. Parmentier translates the word by 'les guerets' ('the fields'); but 'mountain glades' would seem more appropriate.⁵⁹

The word is used, presumably with reference to secular land, in a passage in Xenophon on hunting: "First go to the orgades and reconnoitre to discover where deer are most plentiful."⁶⁰ Finally, the word in the sixth century (A.D.) epigrammatist Agathias (*Anth. Pal.*, VI, 41) clearly refers to cultivated land: "His plough — — he dedicated to thee, Demeter, after cutting the ridge of his well-ploughed orgas."

Until the Pythion and Herakleion of the deme Kykala, which were near our *orgas*, can be located topographically, the exact meaning of *orgas* may remain in doubt; but I would suppose that in all passages from classical authors reference is made to a 'woody, mountainous tract.'⁶¹ Since our *orgas* was hard-by (*ἐπί*) the Pythion, the land may originally have been sacred and retained the name of *orgas* on transfer to private ownership.⁶² It is to be noted that in our entry reference is made to half of an *orgas* and that half of a conduit or canal (*dianomos*) was included in the sale.⁶³

⁵⁵ For the most detailed study of the word *oikopedon*, see J. H. Thiel, *Xenophontos Poroi*, Diss. Amsterdam, Vienna, 1922, p. 9.

⁵⁶ [Demosthenes], XIII, *On the Tribute*, 32. The reference here is to sacred land.

⁵⁷ *Bacchae*, 340, 445; and *Rhesus*, 282.

⁵⁸ E. R. Dodds, *Euripides Bacchae*, Oxford, 1944, pp. 108-109.

⁵⁹ *Euripide*, IV, Paris, 1925, p. 237.

⁶⁰ *Cyn.*, 9, 2. Cf. *Cyn.*, 10, 19.

⁶¹ Harpokration: *ὄργας* καλεῖται τὰ λοχμώδη καὶ ὄρεινὰ χωρία καὶ οὐκ ἐπεργαζόμενα. Cf. Chandler, *J.H.S.*, XLVI, 1926, p. 12; and Kahrstedt, *Ath. Mitt.*, LVII, 1932, p. 9, note 1.

⁶² Disposal of sacred property was rare but not unheard of; see Paul Guiraud, *La Propriété foncière en Grèce jusqu'à la conquête romaine*, Paris, 1893, p. 377. In an Athenian decree of a much later date (*I.G.*, II², 1035, lines 8-9), it is specifically enjoined that in the future no sacred property shall be sold.

⁶³ VI, 104-105. The word *dianomos* is found elsewhere only in *B.C.H.*, XXXIII, 1909, p. 462 (Argos, Roman period).

10. *συνοικία* (IV, 11). The term indicates a tenement house occupied by several persons. A. Jardé translates it as 'maisons de rapport';⁶⁴ Liddell-Scott-Jones as 'house in which several families live.' The word has frequently been translated as 'apartment-house,' for which Finley has recently suggested the substitute term 'multiple-dwelling,'⁶⁵—a term which brings out the functional and, so to speak, non-architectural connotation of the word. One of the key passages for the meaning is Aischines (I, 124): "Where several people hire one house and occupy it, dividing it between them, we call it a synoikia, but where one man dwells, a house." Clearly, the synoikia was rented. In Aristophanes, *Equites*, 1001, the sausage-man boasts that he had a two-storey house and two synoikiai.⁶⁶ In Athenaeus, XII, 542 f, sudden prosperity results from owning synoikiai. The *Thesaurus Graecae Linguae* (s.v.) reports a Latin gloss on the word as 'insula.' The synoikia, then, is not only a multiple-dwelling, it is also a tenement; ⁶⁷ so the translation 'tenement-house' is adopted.⁶⁸

11. *χωρίον* (VI, 80, 94, 96, 98, 102, 133; X, 16, 17, 18). The word does not occur in Homer or in Tragedy. It is found first in Herodotos. Schmidt, in his study of Greek synonyms, defines *chorion* as follows: "*χωρίον* ist unser 'Ort', bezeichnet aber allgemeiner jedes bestimmte Grundstück, z.B. in einer Stadt oder einen Lande, ebenso eine in ihrer Eigentümlichkeit hervorspringende Gegend; daher erscheint ein *χωρίον* oft als Teil einer *χώρα*, aber auch eines anderen *χωρίον*."⁶⁹ In Thucydides alone, *chorion* is qualified by the following adjectives: *ἀφνειόν* (I, 13, 5), *ἀλίμενον* (II, 25, 4), *ἄπεδον* (VII, 78, 4), *ἀφανές* (IV, 29, 3), *δασύ* (IV, 29, 4), *ἐπίκαιρον* (VI, 85, 2), *ἐρημον* (I, 52, 2), *ἰσθμῶδες* (VII, 26, 2), *μετέωρον* (IV, 32, 3), *πετρῶδες* (IV, 9, 2), *πρόσαντες* (IV, 43, 3), *στεόπορον* (VII, 73, 1), *στενόν* (VII, 79, 1), *ὑψηλόν* (III, 97, 2), and *χαλεπόν* (IV, 9, 2).

In epigraphical texts dealing with land, the word has been variously translated: as 'field' by Meritt,⁷⁰ as 'ordinary farm land' by John Day,⁷¹ as 'farm' by Fine.⁷² Kent, in drawing a distinction between *kepos* and *chorion* in the Delian records, wrote

⁶⁴ *Céréales*, p. 147.

⁶⁵ *Op. cit.*, pp. 64-65.

⁶⁶ For what I believe is the correct interpretation of this line, see R. A. Neil, *The Knights of Aristophanes*, Cambridge, 1901, *ad loc.* Neil in effect corrects the common interpretation based on the gloss of the scholiast that *synoikia* is an *apostasis* or *phanoptes*.

⁶⁷ For a construction excavated at Delos, which M. Holleaux suggests was a synoikia, see the report in *Comptes rendus de l'Acad. des Inscr.*, 1904, p. 737.

⁶⁸ Cf. W. S. Maguinness, *Hermathena*, LXIX, 1947, p. 69.

⁶⁹ J. H. H. Schmidt, *op. cit.*, II, p. 3. Examples are collected on pp. 9-13. Cf. also Liddell-Scott-Jones, s.v.

⁷⁰ *Hesperia*, V, 1936, pp. 393 ff.

⁷¹ *Ec. Hist. of Athens*, p. 231.

⁷² *Op. cit.*, pp. 72, 81, etc.

that choria in addition to arable land contained grazing areas.⁷³ Finley usually translates the word simply as 'land,'⁷⁴ but in one case uses 'property.'⁷⁵

Two of our properties which are designated by the term *chorion* are located in town demes.⁷⁶ This might seem to weigh against interpreting choria as 'farms,' but both demes, Bate and Ankyle, which are in the town trittys of the phyle Aigeis, are located southeast of the city walls in the direction of Mt. Hymettos.⁷⁷ This area must have included some farms. Another bit of evidence from our lists is the small fee paid for the chorion in Aphidna—ten drachmas. Even a small tract of agricultural land would presumably be worth a higher figure. Moreover, many of the horoi which refer to choria have been found within the modern city and particularly in the area of the ancient Agora. It must be granted that the place of discovery may be at some distance from the original site; yet the percentage of these horoi mentioning choria is so high that it is difficult to believe some did not refer to urban holdings. I have therefore used the word 'land' to translated *chorion*; but 'landed property' or 'estate' would seem to be equally suitable.⁷⁸

In summary, the following table presents our interpretation of the meaning which the words designating real property bear in the poletai lists.

1. Agros	Field for cultivation in the country
2. Ge psile	Land cultivated for cereals, vines and the like
3. Gepedon	Plot of ground (exact meaning uncertain)
4. Dryinon	Oak grove
5. Kepos	Garden (non-specialized)
6. Oikia	Private residence
7. Oikopedon	House-site
8. Orgas	Woody mountainous tract
9. Pityinon	Pine grove
10. Synoikia	Tenement-house
11. Chorion	Land, Landed property

PRICES

In Table A are listed the prices and locations of the various types of real property which had been owned by the Hermokopidai and Profaners of the Mysteries. Table

⁷³ *Op. cit.*, p. 318, note 240.

⁷⁴ *Op. cit.*, p. 54 and frequently thereafter.

⁷⁵ *Ibid.*, p. 238, note 26.

⁷⁶ VI, 80 and 94. Cf. Demosthenes, LV, *Against Kallikles*, 17.

⁷⁷ See W. Judeich, *Topographie von Athen*², Munich, 1931, pp. 169-172.

⁷⁸ See Buck, *Dictionary*, p. 1310. It may be noted that in Byzantine and modern Greek *χώρα* is popularly used for 'town,' and *χωριό* has the meaning of 'village.' See Buck, *Dictionary*, pp. 1302 and 1308.

TABLE A: PROPERTY LOCATED IN ATTICA SOLD BY POLETAI ^{78a}

<i>Type of Property</i>	<i>Sales Price in Drachmas</i>	<i>Reference in Attic Stelai</i>	<i>Location</i>	<i>Tritty's</i>	<i>Owner</i>
1. Oikia	—	VI, 13-15	Kollytos	City	Diodoros of Eitea
2. Oikia ^π (at least 450)	VI, 76	Kydathenaion	City	Polystratos of Ankyle
3. Oikia	1500	VI, 89	—	—	Euphiletos of Kydathenaion
4. Oikia	105	X, 15	Semachidai	Coast	Euphiletos of Kydathenaion
5. Oikia in agros	Part of 6100	VII, 77	—	—	—
6. Oikia & ½ gepedon	—	IV, 6-9	Mounychia	City	Polystratos of Ankyle
7. Oikia & gepedon	—	VII, 23-4	Athmonon	Inland	—
8. Oikia & gepedon	—	VII, 24-6	—	—	—
9. Oikia, oak grove, pine grove, & pithoi	1800	X, 1-2	—	—	Adeimantos of Skambonidai
10. Oikia, chorion & kepos	205	X, 17	Myrrhinoutta	Coast?	Euphiletos of Kydathenaion
11. Synoikia	—	IV, 11	—	—	Axiochos of Skambonidai
12. Chorion	—	VI, 80	Ankyle	City	Polystratos of Ankyle
13. Chorion (?)	—	VII, 71	Emporioi	Coast	—
14. Chorion	105	X, 16	Gargettos	Inland	Euphiletos of Kydathenaion
15. Chorion	10	X, 18	Aphidna	Inland	Euphiletos of Kydathenaion
16. a. Ge psile b. Oikia in agros c. Agros	1900	VII, 72-74	—	—	—
17. a. Oikia & chorion b. Chorion c. Chorion d. Oikopedon e. Chorion f. ½ orgas g. ½ orgas	1200	VI, 94-108	Bate Lan— Pythion Pythion Herakleion Pythion Kykale	City — — — — — —	Pherekles of Themakos

B lists property owned abroad. For purposes of comparison, we give in Table C the prices of similar types of real estate, mentioned in the Attic Orators,⁷⁹ dating for the most part from the first half of the fourth century B.C. Only types of property which

^{78a} Unless specified otherwise, property is assumed to be in Attica.

⁷⁹ For later authors who refer to Athenian prices, cf., for example, Terence, *Phormio*, 662, and Plautus, *Mostellaria*, 634 and 823.

occur in our poletai lists have been included. This table from the Attic Orators is presented here because no similar detailed compilation occurs, to our knowledge, in the bibliography on ancient house- and land-values. Similarly, in Table D is presented like information about real estate sold by the poletai in the course of the fourth century B.C., as preserved in epigraphical records, and in Table E similar sales from the so-called Hekatostai records. Again only types of property are included which are identical with the types in Table A.⁸⁰

TABLE B: PROPERTY ABROAD SOLD BY POLETAI

<i>Type of Property</i>	<i>Sales Price in Drachmas</i>	<i>Reference in Attic Stelai</i>	<i>Location</i>	<i>Owner</i>
Oikia & agros	950 +	VI, 55-56	Thasos	Adeimantos of Skambonidai
Oikia (with door) in chorion	—	IV, 20-21	Euboea	Nikides of Melite
?	310	VII, 78	Abydos	—
Chorion	—	VI, 133	Thasos	—

TABLE C: PROPERTY IN ATTIC ORATORS

<i>Type of Property</i>	<i>Sales Price in Drachmas</i>	<i>Reference</i>	<i>Location</i>	<i>Trittys</i>
Oikia ⁸¹	300—	Isaios, II, 35	—	—
Oikia	4000	V, 26	Kerameikos	City
Oikia	5000	V, 29	—	City
Oikia	4400	VI, 33	—	City
Oikia	2000	VIII, 35	Dionysion in Limnais	City
Oikia	1300	VIII, 35	—	—
Oikia	3000	XI, 42	Melite	City
Oikia	500	XI, 42	Eleusis	Coast
Oikia	2000	XI, 44	—	City
Oikia	2000	Aischines, I, 98	—	City
Oikia	3000	Demosthenes, XXVII, 10	—	—
Oikia	2000 ⁸²	XXXI, 1 & 7	—	—
Oikia	1000 ⁸²	XLI, 6, 16 & 19	—	—
Oikia	700 ⁸²	LIX, 39	Statue of Hermes Psithyristes	City
Oikia & ge	5000+	Lysias, XIX, 42	—	—
Synoikia	10000	Demosthenes, XLV, 28	—	—
Synoikia	1600 ⁸³	LIII, 13	—	—

⁸⁰ Mention may be made of the *testimonia selecta* in Robinson, *Olynthus*, XII, pp. 399-452, which includes many passages referring in a general way to the value of the Greek house.

⁸¹ Reference is to an *oikidion*.

⁸² Amount of mortgage.

⁸³ Amount of mortgage. Sandys and Paley (*Demosthenes, Select Private Orations*, II⁴, Cambridge, 1910) suggest that this synoikia was worth 10,000 drachmas, which seems unduly high.

<i>Type of Property</i>	<i>Sales Price in Drachmas</i>	<i>Reference</i>	<i>Location</i>	<i>Trittys</i>
Agros	7500	Isaios, VI, 33	Athmonon	Inland
Agros	6000	VIII, 35	Phlya	Inland
Agros	12000	XI, 41	Eleusis	Coast
Agros	15000	XI, 42	Thria	Coast
Chorion	7000	Isaios, II, 34	—	—
Chorion	1000	II, 35	—	—
Chorion	5000	XI, 44	Oinoe	Coast
Chorion	3000	XI, 44	Prospalta	Inland (?)
Chorion	2000	Aischines, I, 99	Alopeke	City
Chorion	6000 ⁸²	Demosthenes, XXXI, 1	—	—

TABLE D: PROPERTY SOLD BY POLETAI IN FOURTH CENTURY⁸⁴

<i>Type of Property</i>	<i>Sales Price in Drachmas</i>	<i>Reference</i>	<i>Location</i>	
1. Oikia	215	<i>Hesperia</i> , XV, no. 31 (pp. 181-184), line 2	Agryle	City
2. Oikia	410	<i>Hesperia</i> , XV, no. 31, lines 9-10	Salamis	—
3. Oikia	145	<i>Hesperia</i> , XV, no. 31, line 16	—	—
4. Oikia	575	<i>Hesperia</i> , X, no. 1 (pp. 14-17), lines 1-39	Alopeke	City
5. Oikia	—	<i>Hesperia</i> , XV, no. 32 (pp. 185-187), line 14	—	—
6. Oikia	483	Pritchett-Meritt, <i>Chronology</i> , p. 89	Agryle	City
7. Oikia & kepos	—	<i>Hesperia</i> , XV, no. 31, lines 35-36	Oion	Inland
8. Oikia, chorion & kleision	—	<i>Hesperia</i> , XV, no. 32, lines 20-21	Melite	City
9. Oikia & chorion	500	<i>I.G.</i> , II ² , 1580, line 1	—	—
10. Oikia & chorion	2375	<i>I.G.</i> , II ² , 1580, line 4	Prasiai	Coast
11. Oikia & chorion	2012½	<i>I.G.</i> , II ² , 1580, line 8	Prasiai	Coast
12. Oikia & chorion	5000	<i>I.G.</i> , II ² , 1580, line 11	—	—
13. Oikia & chorion	400	<i>I.G.</i> , II ² , 1580, line 14	Paiania	Inland
14. Oikia & chorion	—	<i>Hesperia</i> , V, no. 10, line 15	Hagnous	Inland?
15. Synoikia	3705⅓	<i>Hesperia</i> , V, no. 10, lines 117-153	Peiraeus	City
16. Chorion	9050	<i>I.G.</i> , II ² , 1580, line 24	Teithras	Inland
17. Chorion	680	<i>Hesperia</i> , V, no. 10, lines 153-185	Aphidna	Inland
18. ?	3250	<i>Hesperia</i> , XV, no. 31, line 22	—	—
19. —	150-199 ⁸⁵	<i>Hesperia</i> , V, no. 9, line 3	—	—
20. ? ⁸⁶	610	<i>Hesperia</i> , V, no. 9, line 6	Thria	Coast
21.	750(?)	<i>Hesperia</i> , V, no. 9, line 16	—	—

TABLE E: PROPERTY SOLD IN HEKATOSTAI RECORDS

<i>Type of Property</i>	<i>Sales Price in Drachmas</i>	<i>I.G., II² Reference</i>	<i>Location</i>	<i>Trittys</i>
1. Chorion	500	1594, 48-50	Aphidna	Inland
2. Chorion	Part of 81,300	1596, 8-9	Alopeke	City
3. Chorion	2005+	1596, 14-16	Salamis	
4. Chorion	50	1596, 23-24	Pallene	Inland
5. Chorion	800	1596, 27-28	Anaphystos	Coast
6. Chorion	1000	1597, 5-6	Kydantidai	Inland
7. Chorion	1375	1597, 7-8	Kydantidai	Inland
8. Chorion	100	1597, 17-18	Kothokidai	Coast
9. Chorion	250	1597, 21-22	Kothokidai	Coast
10. Chorion	100+	1598, 4-5	Phaleron	City
11. Chorion	700+	1598, 6-7	Phaleron	City
12. Chorion	440	1598, 15-16	Phaleron	City
13. Choria (2)	24,000	1598, 39-41	Halai	Coast
14. Chorion & oikopedon	11,600	1598, 12-14	—	—
15. [Oiko]peda of the chorion	550	1594, 52-53	Oinoe	Coast
16. Kepos	250	1596, 18-20	Pallene	Inland

For the prices of Athenian real estate recorded in horoi assigned to dates between the fourth and second centuries B.C., reference may be made to the four valuable tables presented by M. I. Finley, *op. cit.*, pp. 172-175. These tables are particularly estimable because of the distinction drawn between the different types of horoi.⁸⁷ In the case of dotal obligations a precise value of the property was fixed at the time the agreement on the dowry was reached. We would conjecture that the value indicated on these horoi would closely approximate the real value of the property, for presumably the father would have demanded from the husband adequate security.⁸⁸ In the case of *hypotheke* and *prasis epi lysei* transactions, the two other types of

⁸⁴ The inscription published as *Hesperia*, VII, 1938, p. 127, and lines 20-100 of the inscription published as *Hesperia*, V, 1936, pp. 397-404, were considered too fragmentary to include.

⁸⁵ Determined from the sales tax.

⁸⁶ Meritt restores in this stoichedon inscription: [συνουκίαν καὶ ἐσχατίαν]. For *eschatia* see *ad I.G.*, II², 2498; and Pritchett, *Class. Phil.*, LI, 1956, p. 102, note 9.

⁸⁷ Unfortunately, Finley's tables do not include the evidence from the new Agora horoi, published by J. V. A. Fine in *Hesperia*, Suppl. IX, 1951. In an added appendix (pp. 182-193) Finley does, however, list the new horoi according to the various types.

⁸⁸ Finley (*op. cit.*, p. 30) notes that values in dotal horoi run into substantially larger sums than values in two other groups. He concludes that only wealthy Athenian fathers requested guaranties in the form of real security. This comparison would imply that values in all types of horoi were equal, and the conclusion seems hardly justified.

obligations for which values of real property are given on horoi, we have one example from the year 367/6 B.C. where a house, ultimately sold for 575 drachmas, had one hypotheke for only 150 drachmas and two praseis epi lysei for 100 and 24 drachmas, respectively.⁸⁹ In a speech prepared by Demosthenes for Nikoboulos, defendant in a suit against Pantainetos, the speaker says, addressing his accuser directly, "And upon a property on which you have never been able to borrow more than 10,000 drachmas and which you have sold out and out for 20,000 drachmas — —." ⁹⁰ John Day has concluded that in the case of loans very substantial security would be required and that the true value of mortgaged properties may be approximated by multiplying all sums on the mortgage-horoi by two.⁹¹ In the figures presented in Finley's tables, the median of the sums preserved in dotal obligations averages fairly consistently 50 per cent higher than the median figures in the hypotheke and prasis epi lysei groups.

Prices of so-called undivided land properties as reported in the Attic orators are collected by P. Guiraud ⁹² and Day.⁹³ Unfortunately their presentations make no distinction between the various types of land.

For prices of real estate outside of Attica ⁹⁴ some figures have been collected for Halikarnassos and Iasos by G. Glotz, *Le travail dans la Grèce ancienne*, Paris, 1920, pp. 297-298.⁹⁵ For an estimate of the value of houses at Delos during the period of independence, reference may be made to the special study by Molinier, *Les "Maisons sacrées" de Délos, au temps de l'indépendance de l'île (315-166/5 av. J. C.)*, Paris, 1914, pp. 86 ff.⁹⁶ Finally, D. M. Robinson has published Olynthian inscriptions which record deeds of sale.⁹⁷ One of these is for the sale of a house for an amount which is interpreted as 2000 drachmas. Robinson and Graham have identified this particular house in their report of the excavations.⁹⁸ The date of the inscription is the first half of the fourth century B.C. The price of 2000 drachmas is the same as the median price of houses in our Table C. The house was unpretentious, lacking plastered walls,

⁸⁹ *Hesperia*, X, 1941, pp. 14-16, lines 1-39. For the interpretation of this text, see Finley in *Studi in onore di Vincenzo Aragio-Ruiz*, III, Naples, 1952, pp. 473-491.

⁹⁰ Demosthenes, XXXVII, *Against Pantainetos*, 50. Demosthenes' figures have been corrected into drachmas. The actual sale price was 20,600 drachmas; see paragraph 31.

⁹¹ *Ec. Hist. of Athens*, pp. 226-227.

⁹² *Op. cit.*, pp. 392-393.

⁹³ *Op. cit.*, p. 227.

⁹⁴ For prices outside of the Greek area, see the tables in F. Heichelheim, *Wirtschaftliche Schwankungen der Zeit von Alexander bis Augustus*, pp. 113 ff.

⁹⁵ No complete documentation of the evidence concerning values of real estate throughout Greece is here intended; for such evidence is extensive. See, for example, the great catalogue of the sales of real property at Tenos, *I.G.*, XII, 5, 872.

⁹⁶ On land values at Delos, see J. A. O. Larsen, "Roman Greece," *Economic Survey*, IV, pp. 402-407.

⁹⁷ *T.A.P.A.*, LXII, 1931, pp. 42 ff.

⁹⁸ *Olynthus*, VIII, p. 83 and plates 21, 91. Cf. also p. 97.

cement floors, paved courts, and, in all likelihood, a second storey. The ground plan included two rows of three rooms each and four sheds or the like.⁹⁹

A comparison of the prices recorded in our list of 414 B.C. with the values in fourth century Athens and elsewhere shows clearly that our Stelai give minimum figures much lower than all other minima. One house in a coastal deme was sold for 105 drachmas; one plot of land in Aphidna brought only 10 drachmas. This compares with a minimum of 300 drachmas for a house and 2000 drachmas for a chorion in Table C (Attic Orators). The minimum prices for a house on 19 prasis epi lysei horoi and 6 dotal horoi were 200 and 300 drachmas respectively.¹⁰⁰ The highest preserved price for real estate in our list in Table A, 1900 drachmas, was for three items, a house in *agros* and two plots of land under cultivation. The minimum value for an *agros* alone in Table C, on the other hand, is 6000 drachmas. Whether the explanation for our low prices lies in very small plots or in the general economic picture of the war year 414 B.C. cannot be determined on the evidence of real estate alone.

Although our evidence is admittedly very limited, one or two generalizations may be proffered. Of the seven houses sold by the poletai in Tables A and D, the median value is 410 drachmas. This is in striking contrast with a median value of 2000 drachmas for fourteen houses reported from the Attic Orators, whereas the median value of 19 houses in the prasis epi lysei horoi and of six houses in the dotal *apotimena* horoi are 700 and 750 drachmas, respectively. Clearly, the values of real estate mentioned in the Attic Orators must not be taken as indicating the average wealth of Athenians. Indeed, the values of real estate in Table C run considerably higher than the values on dotal *apotimena* horoi, which Finley has taken to mark the property of the very wealthiest Athenians.¹⁰¹ Such land values as occur in the orators were far beyond the reach of the poorer Athenians, who might readily, on the other hand, have rented such properties as were sold in our Stelai.

There remains to be said a word about the evidence from our Stelai that successful Athenians would buy land in several parts of Attica. Euphiletos of Kydathenaion, for example, owned land on the coast in the demes of Semachidai and Myrrhinoutta, which were in the widely separated phylai of Aigeis and Antiochis, and inland in the demes of Gargettos and Aphidna, which were in the phylai of Aigeis and Aiantis. Polystratos of Ankyle owned property in his own deme, located east of the city walls, as well as in Mounychia. This is in accord with other evidence that rich Athenians

⁹⁹ See Robinson and Graham, *op. cit.*, pp. 83-84. It should be noted, however, that Robinson himself later (*Olynthus*, XII, pp. 72-73) argued that the price of 2000 drachmas was for half a house. In collecting figures for the prices of Olynthian houses he observed that other houses, apparently three in number, in the same section brought 4000, 4500, and 5300 drachmas, respectively. There is nothing in the text of the inscription, a deed of sale, to suggest that this was only half a house: reference is made simply to an *oikia*.

¹⁰⁰ See Finley, *op. cit.*, pp. 173, 175.

¹⁰¹ *Op. cit.*, pp. 79 ff. But see note 88 above.

usually became large land-holders without forming large estates, and that Attica was almost unacquainted with the agrarian system which consists in the formation of vast continuous domains organized for cultivation.¹⁰²

On the extent of holdings in non-Attic territory, more will be said elsewhere, since the main evidence in our Stelai comes from the summaries which included the totals for all types of possessions. It may be noted here, however, that line 15 of Stele IV, which contained the word *ὑπερορία*, 'foreign land,' seems to be the heading for a list of real property owned abroad. Whereas the real property listed above line 15 was located in Attica, the first item beneath the heading was in Euboea. The property was owned by Nikides of Melite, and included a house. The remainder of the stele is fragmentary. In Stele VI, lines 55-56, the property of Adeimantos of Skambonidai included a house and agros on the island of Thasos. The real estate, including pithoi, was sold for a price which contained six numerals. Only the last three figures are preserved, but the sum could not have been less than 950 drachmas and may well have been much more. Finally, in Stele VII, line 78, there is clear reference to property at Abydos, which I take to be the city of that name on the Hellespont.

VI. SLAVES

With regard to slave problems in Greece, Zimmern wrote over twenty-five years ago: "the same authors are ransacked; the same evidence is marshalled; the same references and footnotes are transferred, like stale tea leaves, from one learned receptacle to another."¹ Our inscriptions, if preserved complete, would have shed much new light on the whole problem of slavery. But even in their fragmentary condition, the Agora pieces do contribute some measure of new information about prices and nationalities, in particular.²

PRICES

The average price for the twenty-five slaves whose sales prices are complete is approximately 174 drachmas. One of our slaves was described as a young child (*παιδίον*) and sold for 72 drachmas, another as a child (*παῖς*) and sold for 174 drachmas, the average fee for an adult. The average price for the five women was 178 drachmas; for the seventeen men, 179 drachmas.³ The sex of the Cappadocian is uncertain.

¹⁰² See, for example, Glotz, *op. cit.*, pp. 299-300; and Michell, *Ec. of Anc. Greece*, pp. 43-44.

¹ *Solon and Croesus*, London, 1928, p. 106. Quoted by W. L. Westermann in *Athenian Studies Presented to W. S. Ferguson* (= *Harv. Stud. Class. Phil.*, Suppl. Vol. I, 1940), p. 452.

² The slaves listed in Stele XI have not been considered in this section because of the uncertain nature of the list.

³ I find no basis for Andreades' statement (*Hist. of Gr. Pub. Finance*, I, p. 283) that in the fifth century the average price of women slaves was somewhat higher than that of men. Andreades himself notes that this was not the case at Delphi during the second century.

For purposes of comparison, the following evidence from fourth-century Athenian writers is presented.⁴ The table is based in part on Westermann, *R.E.*, Supplement VI, 1935, *s.v. Sklaverei*, 915-916.

TABLE: PRICES OF SLAVES IN FOURTH-CENTURY AUTHORS⁵

Reference		Price
Xenophon	<i>Mem.</i> , II, 5, 2	Prices varied 50-1000 dr. per slave
	<i>Vect.</i> , IV, 23	180 dr. (average price for slaves working in silver mines. Computed). ⁶
Demosthenes	XXVII, 9 and 18	200 dr. apiece (20 pawned in lieu of a debt of 4000 dr.). ⁷
	XXVII, 9	300-600 dr. (32-33 slaves in sword-factory worth 500-600 dr. each; none less than 300 dr.).
	XXVII, 18	200 dr.
	XLI, 8	200 dr.
[Demosthenes]	LIII, 1	125 dr.
	LIX, 29	3000 dr. (for a courtesan)
Hyperides	III (V), 2	300 dr. (for a courtesan)

The average price in 414 B.C. is seen to be somewhat lower than the prices of the fourth century, but it must be borne in mind that most of the fourth-century literary references are to skilled artisans who naturally brought a large sum. The effect which the skill of a slave had on his value comes out clearly from a passage in Aischines which gives the profit of a shoemaker as two obols a day, and of an overseer three obols;⁸ whereas Xenophon had computed the profit of a slave in the mines as an obol a head.⁹

The following table shows the nationalities of all slaves for whom the sales price is completely preserved in our inscriptions:

⁴ For slave prices in Greece after 200 B.C., see J. A. O. Larsen, "Roman Greece," *Economic Survey*, IV, p. 414. The majority of prices in this period range from 300 to 500 drachmas.

⁵ Of the prices of slaves recorded in W. L. Westermann's important presentation in *R.E.*, *s.v. Sklaverei*, 915, eight will be found to be different from the prices given in our tables. Westermann's reference to the *editio minor* is erroneous, and it is possible that he was working from an incorrect copy. These same errors are perpetuated in his *The Slave Systems of Greek and Roman Antiquity*, Philadelphia, 1955, p. 14. Moreover, Westermann did not utilize the new evidence of our document.

⁶ See F. Oertel, *Rh. Mus.*, LXXIX, 1930, pp. 236-237. Cf. J. H. Thiel, *Xenophontos Poroi*, Diss. Amsterdam, 1922, pp. 52-54.

⁷ The slaves were presumably worth more on the open market.

⁸ I, *Against Timarchos*, 97.

⁹ *Vect.*, IV, 23.

	<i>Country</i>	<i>Price of slaves in drachmas</i>	<i>References in Attic Stelai</i>
East	Cappadocia ¹⁰	151	I, 48
	Caria	72. 105. 174. 360	I, 46; I, 38; I, 45; II, 77-78
	Colchis	153	I, 44
	Lydia	60	I, 49
	Syria	240. 301	I, 37; I, 47
North	Illyria	121. 161	I, 43; I, 39
	Macedonia	310	II, 79-80
	Scythia	144	I, 42
	Thrace	115. 135. 165. 170. 195. 220	I, 41; I, 35; I, 34; I, 36; X, 7; I, 40
Greece	Messene	130	X, 9

In addition, the following nationalities can be identified, although the sales price is not preserved:

<i>Country</i>	<i>Number of Slaves</i>	<i>References in Attic Stelai</i>
Caria	3	I, 9; VI, 20; VII, 8-9
Phrygia	1	VI, 18
Scythia	1	VII, 7-8
Thrace	3	II, 70; VII, 3-4, 12-13

Of the twenty-eight slaves, sixteen, or 57%, came from the two countries Caria and Thrace.¹¹

The highest prices were paid for the Carian goldsmith (360 drachmas) and the Macedonian woman (310 drachmas). Next came the two Syrian men (301 and 240 drachmas). The six Thracians averaged 166 drachmas, the four Carians 177 drachmas, and the two Illyrians 143 drachmas each. The Greek from Messene, who had fallen into slavery,¹² brought only 130 drachmas.

The average price of slaves from the east (179½ drachmas) is almost identical with that (173 drachmas) for northern slaves. It appears that differences in price must be attributed to other factors than nationality.

¹⁰ The slave was a native of Melitene, which I take to be that in Cappadocia. Tod (*Gr. Hist. Inscr.*, I², p. 199) notes that the slave may have come from the Illyrian island of Melite in the Adriatic sea, or from Malta. G. Glotz (*Le travail dans la Grèce ancienne*, p. 233) regards him as a Maltese.

¹¹ Cf. Schol. to Plato, *Laches*, 187 b: ἐν τῇ Καρίῃ . . . ἀντὶ τοῦ ἐν τῇ δούλῳ· καὶ γὰρ οἱ παλαιοὶ τῶν Ἑλλήνων ἀπὸ Καρῶν καὶ Θρακῶν τοὺς δούλους ἐποιοῦντο. Ehrenberg (*People of Aristophanes*², p. 171) states that Lydians and Phrygians were the slaves most common in Athens. His references are to comedy, and hardly justify this conclusion.

¹² See U. von Wilamowitz-Moellendorff, *Aristoteles und Athen*, Berlin, 1893, II, p. 179.

OCCUPATION

Three of the slaves of Adeimantos (VI, 20-22) and three others named in the first column of Stele II (lines 73, 76 and 78) are described by their occupations. Five different occupations are designated: ὀβελισκοποιός, ὀνηλάτης, σκυτοτόμος, τραπέζοποιός and χρυσοχοῦς. The fees for the goldsmith (360 drachmas) and the *trapezopoios* (215 drachmas) were much above average, that for the donkey driver (140 drachmas) much below.

The word ὀβελισκοποιός is new. *Obeliskos* is the term generally applied to iron spits or skewers,¹³ or to objects, such as nails,¹⁴ shaped like a spit. For the industrial specialization concerned in the manufacture of this one particular iron object, comparison may be made with other types of smiths: nailsmith (ῥήλοποιός), sicklesmith (δρεπανοποιός), locksmith (κλειδοποιός), cutlerysmith (μαχαιροποιός), spear-maker (λογχοποιός), etc.¹⁵

Liddell-Scott-Jones defines the *trapezopoios* as 'a slave who sets out the table,' but the suggestion has more recently been made that he was a carpenter who made tables.¹⁶ The lexicographers, interested in the similarity of *τραπέζοποιός* and *τραπέζοκός*, defined the *trapezopoios* as the slave who had charge of the servants, of the utensils, and of entertainments,¹⁷ a sort of manager of the table. Athenaeus (IV, 170 d and e, translation of C. B. Gulick with slight modification) quotes two fragments from the fourth-century comic poets, Philemon and Antiphanes, respectively: "You have no oversight in the kitchen; a *trapezopoios* is appointed to serve;" and "I went and hired in addition this *trapezopoios*, who will wash the dishes, get the lamps ready, prepare the libations, and do everything else which it is his business to do."

Athenaeus defines the *trapezopoios* as: τὸν τραπέζων ἐπιμελητὴν καὶ τῆς ἄλλης εὐκοσμίας.¹⁸ Pollux states that he is ὁ πάντων τῶν περὶ τὴν ἐστίασιν,¹⁹ and elsewhere enumerates the members of his long retinue.²⁰ The *trapezopoios*, then, was a manager of all services related to the table.

The *skytotomos* is defined by Liddell-Scott-Jones as 'leather-cutter, worker in leather; esp. shoemaker, cobbler.' Earlier, Tod had rendered the word as 'saddler' which allowed him to distinguish it from the term *hypodematopoios*.²¹ While Pollux

¹³ See below, pp. 312-313. For bibliography, see Reinach in Daremberg-Saglio, *Dictionnaire*, s.v. *Veru*, and Deonna, *Délos*, XVIII, p. 227.

¹⁴ See *I.G.*, XI, 2, 178, line 70. Cf. *I.G.*, I², 313, line 141.

¹⁵ For references for these terms, see Blümner, *Technologie*, IV, pp. 360-363.

¹⁶ D. Hereward, *B.S.A.*, XLVII, 1952, p. 114. There is no evidence to corroborate this.

¹⁷ Cf. Hug in *R.E.*, s.v. *Structor*, 383.

¹⁸ IV, 170 e.

¹⁹ III, 41. Similar definitions may be found in Hesychius, Photius and *Et. Mag.*

²⁰ IV, 13.

²¹ *B.S.A.*, VIII, 1901-1902, p. 204.

lists the word among those which concern shoemaking²² and elsewhere enumerates the tools of the *skytotomos* as including the shoemaker's last, the awl, and the shoemaker's knife,²³ Hesychius gives the word a wider definition and includes tent-making. In Aristophanes the word is definitely connected with shoemaking,²⁴ but in Homer the *skytotomos* was a maker of shields,²⁵ and in Xenophon the word seems to apply to more than shoemaking.²⁶ The term seems to have had its origin in the first activity of the leatherworker, the cutting of the leather,²⁷ and is sometimes used for the fabrication of all leather goods, but far more frequently in the special sense of shoemaker.

For the goldsmith, reference may be made to *I.G.*, I², 374, line 103; II², 1558 B, line 56; 1559 A, line 23; and to line 19 of D. Hereward's new fragments of *I.G.*, II², 10;²⁸ and for the donkey driver to *I.G.*, II², 1558 A, line 20; and 1559 B, line 97.²⁹

SOURCES OF SLAVES

Three of the slaves in our lists are characterized as 'born in the house.'³⁰ This compares with ten slaves who are designated by foreign ethnics (e.g., — — — τὸ γένος Θράξ),³¹ and eighteen whose names are formed from such ethnics (e.g., Θράττα, Καρικόν).³² Of these eighteen, one was a Greek from Messene.³³ In addition, Olas of X, 7 was presumably a Thracian.³⁴ There remain eight slaves who have Greek names, or names which in other contexts are attributed to Greeks.³⁵

If we accept the names as an indication of place of origin—and this assumption seems safe, since the majority of slaves came from war³⁶—twenty-eight slaves were

²² VII, 80.

²³ X, 141. These tools may be well seen on vases illustrating the shoemaker at work, as e.g., Cloché, *Classes*, etc., pl. XXX.

²⁴ *Equites*, 740; *Lys.*, 414. Cf. *Eccl.*, 432; *Plutus*, 162, 514.

²⁵ *Il.*, VII, 221.

²⁶ *Cyr.*, VI, 2, 37.

²⁷ German "Reimer." See Blümner, *Technologie*, I², pp. 273 ff., where complete testimonia for *skytotomos* have been collected.

²⁸ *B.S.A.*, XLVII, 1952, p. 108.

²⁹ Also see Blümner, *Technologie*, IV, p. 303 for many references to the goldsmith.

³⁰ II, 72; 75, and VI, 23: οἰκογενής. In Plato, *Men.*, 82 B, Sokrates asks concerning a slave: "Ἑλλήν μὲν ἐστὶ καὶ ἐλληνίζει;" to which question, Meno answers: "πάνν γε σφόδρα, οἰκογενής γε." It may be noted that the late Greek οἰκογένεια, which means 'the status of an *oikogenes*,' is the modern Greek word for 'family'; see Buck, *Dictionary*, p. 133.

³¹ I, 9; II, 70, 77, 80; VII, 4, 6, 8, 9, 11, 13.

³² I, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49; VI, 18; X, 9.

³³ X, 9.

³⁴ See Hiller *ad I.G.*, I², 328, line 7.

³⁵ Apolophanes (VI, 19), Aristarchos (VI, 21), Aristomachos (VI, 54), Kydimachos (X, 3), Pistos (I, 28), Satyros (VI 22, and X, 25), and Charias (VI, 20). Only one of these names (Pistos) is not found in Kirchner, *P.A.*

³⁶ See Glotz, *op. cit.*, p. 230.

foreign-born, three were homebred, and nine others may have been Greeks or born in Greece. The ratio of foreigners to Greeks, then, was at least as high as 28:12, or 70%, and only 7½% of the slaves were homebred. For purposes of comparison, Glotz's figures from the inscriptional deeds of manumission found at Delphi show that of 841 slaves freed, 217, or roughly 25%, were 'born in the house.'³⁷ One would expect a percentage higher than normal from the Delphic manumissions because a master would be more willing to free servants whom he had known since their childhood.

POSSESSIONS

Our lists preserve only the partial record of the sale of the property of one slave. This slave, Aristarchos, had been owned by Adeimantos of Skambonidai, and is described as a skytotomos. His possessions are itemized in VI, lines 33-46. No prices are preserved. His property, insofar as the items can be restored, included beds and tables, possessions of no high value. In the fourth century, according to Isaïos, II, *Estate of Menekles*, 29 and 35, a certain slave Menekles had goods to the value of 7000 drachmas, and in Isaïos, XI, *Estate of Hagnios*, 42, it is stated that the value of the private property of the slave Stratokles after his death amounted to 5 talents 3000 drachmas.³⁸

VII. TILES AND BRICKS

I. TILES

In Stelai II and VII, we have preserved four terms meaning 'tile.' They are as follows:

καλυπτήρ
κεραμίς
κέραμος
κέραμος στεγαστήρ

According to Blümner,¹ the general terms for roof tile are *keramis* and *keramos*.² The convex cover tile (Latin: *imbrex*) is *kalypter*. The concave bottom tile, flat in the middle with flanged edges, is the *keramos* or the *keramos stegaster* (Latin:

³⁷ *Ibid.*, p. 230.

³⁸ On the general subject of the possessions of slaves, see W. L. Westermann, *R.E.*, s.v. *Sklaverei*, 911 ff.

¹ *Technologie*, II, pp. 30-31. Cf. A. Jardé in Daremberg-Saglio, *Dictionnaire*, s.v. *Tectum* and *Tegula*; and F. Ebert in *R.E.*, s.v. *Tegula*.

² Thus, Thucydides (II, 4, 2; III, 22, 4 and 74, 1; IV, 48, 2) seems to use the two words synonymously. Starkie (*ad* Aristophanes, *Nubes*, 1127) incorrectly defines *keramos* as 'unbaked tile.'

tegula).³ There are today various terms for this tile: 'flat tile,' 'lower tile,' 'rain tile,' and 'pan tile.' There were variations, however, and one type has been recovered in which flat tile and cover tile were made in one piece. For a detailed description of various types of Greek tiles, see A. Andrén, "Architectural Terracottas from Etrusco-Italic Temples," *Skrift. Sven. Inst.*, VI, 1940, pp. lxxxviii ff.

For convenient descriptions of how roof tiles were laid, see J. Durm, *Die Baukunst der Griechen*³, Leipzig, 1910, pp. 197-206 (useful for its clear sketches); E. D. Van Buren, *Archaic Fictile Revetments in Sicily and Magna Graecia*, London, 1923, pp. xviii-xix; H. A. Thompson, *Tholos of Athens (Hesperia, Suppl. IV)*, 1940, pp. 66-73 (for the roof of the tholos); and G. P. Stevens, *Hesperia*, XIX, 1950, pp. 181-184.

One modification must probably be made to Blümner's terminology. The *keramis*, just as the *keramos*, could be used for the lower tile. In *Insc. Délos*, 440 A, lines 79-89, *keramis* and *kalypter* are listed side by side as the tiles for various buildings in accounts dated between 190-180 B.C. The distinction is maintained throughout, and it seems necessary to interpret the *keramis* here as different from the *kalypter*, and hence as the lower tile.

PRICES. Relatively full information is available for the price of roof tiles from Delos in the third century B.C. It is much less complete for other places. The table below gives in graphic form such prices as are known to me from epigraphical sources. The figures from Delos are based in part on those of Glotz and Larsen.⁴ It is to be noted that prices were considerably higher in the fourth century than in the fifth and by 246 B.C. had fallen to about one-half of what they had been.⁵

For prices in *Economic Survey*, other than those from Delos, I have noted only one quotation from Ephesos in Asia Minor (Vol. IV, p. 838) where 300 roof tiles cost 50 drachmas. Finally, it may be of interest to note that we know that one man

³ I. Thallon-Hill and L. S. King (*Corinth*, Vol. IV, part 1, *Decorated Architectural Terracottas*, Cambridge, 1929, p. 39) call the flat tiles by the term *ἡγεμόνες*, a word which is applied to tiles only in inscriptions. In *I.G.*, II², 1627, lines 303 and 305, *hegemones* is modified by *leontokephaloi*, 'lion-headed'; they seem to have been the lowest row of pan tiles turned up to form a *sima* and accordingly provided with lion heads. Cf. *I.G.*, IV², 102, line 100, where the word is coupled with *paraietis*. See, also, Robinson, *Olynthus*, XII, p. 466; and H. Lattermann, *Griechische Bauinschriften*, Strassburg, 1908, p. 34. In the Eleusis inscriptions the front tile of each row of convex tiles was called the 'hegemon with flower patterns.' See K. A. Rhomaios, *Κεράμοι τῆς Καλυδῶνος*, Athens, 1951, pp. 24 ff. This hegemon, or eaves cover tile with antefix, is described with illustrations by F. Noack, *Eleusis*, Berlin and Leipzig, 1927, pp. 66-68. In either case, the hegemon tile belongs at the edge of the roof.

⁴ G. Glotz, *Journal des Savants*, XI, 1913, p. 19; and J. A. O. Larsen, "Roman Greece," *Economic Survey*, IV, pp. 397-398. See also Larsen, "The Price of Tiles at Delos from 210 to 180 B.C.," *Class. Phil.*, XXXVI, 1941, pp. 156-166.

⁵ See Larsen, *Economic Survey*, IV, pp. 397-398.

PRICES OF ROOF TILES

<i>Place and Date</i>	<i>Type of Tile</i>	<i>Single</i>	<i>Pair</i>	<i>Reference</i>
ELEUSIS				
329/8 B.C.	Corinthian keramis	1 dr. ⁶		I.G., II ² , 1672, line 72
	Corinthian keramis	5 ob. ⁶		II ² , 1672, line 72
	Laconian keramos		4 ob.	II ² , 1672, line 188
	Agelaia keramis	1 dr. 1 ob. ⁶		II ² , 1672, line 209
EPIDAUROS				
IV/III	keramis		3 dr. ⁷	IV ² , 108, line 147
init. III	keramis	1 dr. 3 ob.		IV ² , 109, II, line 98
	keramos		3½ ob.	IV ² , 109, II, line 143
	Corinthian keramos	1 ob.		IV ² , 109, II, line 149
DELOS				
303	keramos		1 dr. 2 ob.	XI, 2, 144 A, line 63
282	[keramis]		4½ ob.	XI, 2, 158 A, line 85
279	keramos		5 ob.	XI, 2, 161 A, lines 73-74
274	keramos		1 dr. 1¾ ob. ⁸	XI, 2, 199 A, line 109
269	[keramis]		1 dr.	XI, 2, 203 B, line 3
250	keramis	4 ob.	4-5 ob.	XI, 2, 287 A, lines 85, 113-114
246	keramos		4 ob.	Insc. Délos, 290, line 161
246	keramis		4 ob.	290, line 165
208	keramis ⁹	3 ob.		365, lines 46, 52
207	keramis		5½ ob.	366 A, line 22
207	keramis		5 ob.	366 A, line 24
190-180	keramis	2½ ob.		440 A, line 79
	kalypter	2¼ ob. ¹⁰		440 A, line 79
	keramis	2½ ob.		440 A, lines 85, 89
169	[keramos]		ca. 1 dr. 1 ob.	461 Ab, lines 52-54

at Rome could make 220 bricks per day,¹¹ and T. Frank has estimated that tiles would be twice as expensive as bricks.¹²

1. *καλυπτήρ* (VII, 97). Cover tile. Stele VII contains the entry for 210 cover tiles in line 97. In the following line, there is an entry for *Κορινθιονργεῖς* cover tiles, which presumably were distinct from those in line 97. Of the numerals for these

⁶ Transportation charges to Eleusis are listed separately and are not included in this price.

⁷ Lattermann (*B.C.H.*, XXXII, 1908, p. 298) believes the price included transportation charges.

⁸ Beginning with 274 B.C., the price given is for tiles delivered at the required site. In 282 and 279, the tiles were purchased at Syros.

⁹ Larsen (*Class. Phil.*, XXXVI, 1941, p. 163) believes that in this document *keramis* refers to the lower tile.

¹⁰ The prices are those of Larsen, as computed in *ibid.*, pp. 160-161.

¹¹ H. Dessau, *Inscriptiones Latinae Selectae*, Vol. 2: 2, Berlin, 1906, 8675.

¹² *Economic Survey*, I, p. 165.

Corinthian cover tiles, only an upright stroke is preserved, but it is reasonable to conclude in the light of the figures in the three lines above that the first numeral was the sign for 100.

In 1882, E. Fabricius defined the Corinthian tile of inscriptions as one made in Corinth and thence exported.¹³ He asserted that it was not, like the later Corinthian column, a specific type. In the following year, W. Dörpfeld denied this, and suggested that Corinthian tiles were an angular variety,¹⁴ a view which has found wide acceptance and has no evidence against it. Rounded tiles he regarded as Laconian. Lattermann, in turn, advanced a different explanation,¹⁵ and he was followed only by H. Koch.¹⁶ They postulated that Corinthian tiles were made in one piece (*imbrex* and *tegula*). This view has now been criticized by L. D. Caskey,¹⁷ Thallon-Hill and King,¹⁸ Rhomaïos,¹⁹ Robinson and Graham,²⁰ and others; and on the basis of abundant archaeological evidence, which to my knowledge has been most completely assembled in André, *op. cit.*, pp. lxxxviii-c, Dörpfeld's position would seem to have been sustained.²¹

In my reading on tiles, I have failed to find any description of the term *κέραμος Ἀττικός*. This occurs in Pollux, X, 182, and is specifically attributed to our stelai. The Corinthian, Sicilian²² and Laconian tiles have been defined according to type, and we know that Laconian tiles were far more common in Athenian buildings than the Corinthian type. Moreover, a tile standard for the measurement of curved Laconian tiles has been found in the Athenian Agora.²³ But for a specific Attic tile we have no information at all. We would conjecture that it was a rare type which was used in the fifth century and subsequently disappeared from use.

2. *κεραμίς* (VII, 96). Roof tile. The word is used in the general sense of roof tile in Aristophanes, *Vespac*, 206; Thucydides, III, 22; and Xenophon, *H.G.*, VI, 5, 9.

¹³ *Hermes*, XVII, 1882, p. 582.

¹⁴ *Ath. Mitt.*, VIII, 1883, p. 162: "die grossen viereckigen, plattenartigen *κεραμίδες* mit dachförmigen *καλυπτήρες* . . ."

¹⁵ *B.C.H.*, XXXII, 1908, pp. 298 ff.; cf. B. Keil, *Hermes*, XIX, 1884, p. 154, note 1. It may be noted that in *I.G.*, II², 1672, lines 71-72, Corinthian tiles were purchased both in Athens and from Corinth. Those bought in Athens were more expensive.

¹⁶ *Röm. Mitt.*, XXX, 1915, p. 111.

¹⁷ *A.J.A.*, XIV, 1910, p. 308, note 2.

¹⁸ *Corinth*, IV, 1, pp. 39-42.

¹⁹ *Gnomon*, VII, 1931, pp. 650-651.

²⁰ *Olynthus*, VIII, p. 234.

²¹ Attention should be drawn to the single mention of *καλυπτήρας μυλωθριαίους* in *Insc. Délos*, 456 A, line 4, which Durrbach defines as 'noues,' or 'gutter tiles.' Cf. Deonna, *Délos*, XVIII, p. 124.

²² W. Darsow, *Sizilische Dachterrakotten*, Berlin, 1938.

²³ This standard was published in detail by G. P. Stevens in *Hesperia*, XIX, 1950, pp. 174-188. It was found in front of a small building in the southwest corner of the Agora which has been designated as the Civic Offices (*Hesperia*, XVI, 1947, p. 200, pl. XLII, 2). The building dates from the early Roman period. Stevens claims that the dimensions of the standard were given in Attic feet.

In *Insc. Délos*, 366 A, lines 21 and 23, the *keramides* are purchased by the pair. The word is here modified by *ἐπίζυγοι*. This is the only occurrence in Greek of this adjective.²⁴ Liddell-Scott-Jones, marking the word as “dub. sens.,” offer no definition. Since the tiles were purchased in pairs, it would seem natural to consider a pair as consisting of two unlike tiles, the cover tile and flat tile. *Epizygos* might indicate that they were joined together. This is the interpretation for *epizygos* offered by Lattermann, who bases his argument in part on prices for tiles.²⁵ But more recently Larsen has stated that the original tiles, which have been recovered from the Delian stoa to which the inscription refers, prove that the pairs were not combined.²⁶ He therefore interprets *epizygos* as synonymous with *seuge*. In the majority of these passages, *keramides* means ‘roof tile’ without distinction of cover tile or pan tile. In Stele VII, the entry states that 221 *keramides* were sold.

3. *κέραμος* (II, 122; VII, 94, 99). Tile or rain tile. *Keramos* sometimes means ‘the potter’s clay,’ but usually the product, as ‘pottery, earthen vessel, tile.’²⁷ In Stele VII, the word occurs in a list of roof tiles. In both lines 94 and 97 *keramos* is in the singular number and is modified by *palaïos*, ‘old.’ Unfortunately, the price, which to judge by all parallels would certainly have been less than a drachma, is not preserved.

4. *κέραμος στεγαστήρ* (II, 112-123). Lower tile. In Part I, the following text was offered for lines 122-123 of Stele II:

κεράμο στέ[ρ]ας !!
στερὸς ζευκ[τε]ρί(α)

The surface of the marble is very weathered, as can be seen from the photograph on plate 70 of *Hesperia*, XXII, 1953. What I originally read with dots as faint signs for two units in line 122, consisting of marks in vertical alignment with the numerals in the line above, cannot be traces from the ancient text. The following reading must be substituted:

κεράμο στε[γ]α{σ}—
στέρως ζεύ· Η[. . .]!

The Attic form *κεράμο* is not to be taken as a dual, but as the genitive singular. The stonecutter doubled the sigma in the middle of the second word.²⁸ As was reported

²⁴ It is not clear why Buck and Petersen, *Reverse Index*, p. 631, list this word as *ἐπίζυγον*, hence presumably a substantive.

²⁵ *Op. cit.*, p. 298. Lattermann has been followed by Noack (*op. cit.*, p. 60, note 3). Ebert (*R.E.*, s.v. *Tegula*, 122) takes both *ζεύγη* and *ἐπίζυγοι* to mean that flat and cover tile were combined into one.

²⁶ *Class. Phil.*, XXXVI, 1941, p. 158, note 8.

²⁷ See Buck, *Dictionary*, p. 618.

²⁸ Cf. other examples in K. Meisterhans, *Grammatik der Attischen Inschriften*⁸, Berlin, 1900, p. 98.

in the commentary on line 123 in Part I, the fourth letter of what is now the third word cannot be an Attic gamma. This would enable us to read the word ζεύγη. The base of an upright stroke may, however, be taken as part of the sign for the numeral one hundred, and the word for 'pairs' was abbreviated.

Hesychius defines *stegaster* as σωλήν. The critical passage for the definition of the latter word is Plutarch, *Mor.*, 526 B (*De cupid. divit.*, 7),²⁹ where the reference is to the pan tile, or the lower tile.³⁰

II. BRICKS

πλίνθος (V, 36). Brick.³¹ The word was originally applied to a 'slab of stone,'³² and this meaning must be understood in *I.G.*, I², 372, lines 10 ff.³³ More commonly, *plinthos* was used for 'brick.' It was applied to sun-baked as well as fire-baked brick. Ordinary building was carried out with unbaked bricks.³⁴ This was certainly true of private buildings,³⁵ and Pausanias, in addition, gives a long list of temples which were built of such material.³⁶ Robinson-Graham have reported on the strength and advantages of these common sun-dried bricks, of which most house walls at Olynthos were constructed.³⁷ They correct the impression that such material was primitive and that houses built of it must have been small and unpretentious. This method of construction was more durable than that in which soft stones were used, and Demosthenes speaks of houses of illustrious men which had lasted from an earlier age.³⁸

PRICES OF BRICKS³⁹

Date		Price per Thousand	Reference
ELEUSIS			
329 B.C.	Plinthoi, including transportation within Eleusis	38 dr.	<i>I.G.</i> , II ² , 1672, line 26
	Plinthoi, 1½ ft. long	36 dr.	II ² , 1672, line 56
	Plinthoi with <i>geonion</i> ⁴⁰	40 dr.	II ² , 1672, line 57

²⁹ See Blümner, *Technologie*, II, p. 31, note 3.

³⁰ See also Durrbach *ad I.G.*, XI, 2, 203 B, line 97.

³¹ See Ebert in *R.E.*, s.v. *Later*.

³² See Buck, *Dictionary*, p. 603. For a somewhat different etymology ('clod of earth'), see W. Belardi, *Doxa*, III, 1950, p. 218.

³³ In one inscription, *I.G.*, IV², 102, *plinthos* is used for both 'stone slab' and 'clay brick.'

³⁴ See Xenophon, *Mem.*, II, 1, 7; and Vitruvius, II, 8, 16.

³⁵ Plutarch, *Demosthenes*, 11.

³⁶ II, 27, 6; X, 35, 5.

³⁷ *Olynthus*, VIII, pp. 224-229. Cf. Robinson, *Olynthus*, XII, p. 468.

³⁸ XXIII, *Against Aristokrates*, 207; cf. III, *Third Olynthiac*, 25.

³⁹ Prices do not include transportation unless so specified.

⁴⁰ This is the only occurrence of the word *geonion*. It indicates the price at which the clay was purchased. So C. Tsountas, *Εφ. Ἀρχ.*, 1883, p. 131; Dittenberger (*ad Syll.*², 587); Kirchner (*ad I.G.*, I², 1672); and Liddell-Scott-Jones. Michell (*Ec. of Anc. Greece*, p. 130) apparently takes the word to mean 'mortar.'

<i>Date</i>		<i>Price per Thousand</i>	<i>Reference</i>
DELOS			
282 B.C.	Plinthoi	65 dr. ⁴¹	I.G., XI, 2, 158 A, line 58
	Plinthoi	71 dr. 2½ ob. ⁴¹	XI, 2, 158 A, lines 58-59
	Plinthoi	77 dr. 4⅔ ob. ⁴¹	XI, 2, 158 A, line 60
ca. 280	Plinthoi	15 dr.	XI, 2, 165 A, line 6
ca. 268	Plinthoi	50 dr.	XI, 2, 204, line 71
ca. 250	Plinthoi (delivered and laid)	63 dr. 2 ob.	XI, 2, 287 A, lines 99-101

For prices of brick in Rome, see Frank, *Economic Survey*, I, p. 165.⁴² Frank estimates the price at one sesterce for about 70 bricks.

VIII. TOOLS. MISCELLANEOUS OUTDOOR ITEMS

Of the items discussed in this section, the group to which the most study has been devoted in modern times comprises tools used in Greek sculpture. The entire second part of S. Casson's *Technique of Early Greek Sculpture*, Oxford, 1933, is given to a study of such tools from antiquity.¹ Reference has been made to Blümel, *Griechische Bildhauer an der Arbeit*, fourth edition, 1953, to Blümner, *Technologie*, and to various articles in Daremberg-Saglio, *Dictionnaire*. Blümner attempts to associate each tool with its ancient Greek name, and his work has been the most useful single publication. The articles in Daremberg-Saglio usually contain full illustrations. W. M. F. Petrie (*Tools and Weapons*, British School of Archeology in Egypt, London, 1917), while specifically referring to Egypt, has collected numerous comparisons from all other countries.

For prices, the author has systematically consulted the various indexes of *Economic Survey*, vols. I-V. These volumes contain only one table for prices of tools, that from Egypt in the second and third centuries after Christ (vol. II, p. 471). Reference has also been made to entries for tools in the Edict of Diocletian (A.D. 301). The evidence for prices in Greek building inscriptions, inventories and financial accounts has never been completely collected, but the author has, whenever possible, reported parallels in Athenian and Delian records. On the whole, the picture obtained is that tools and weapons were not cheap. One bit of almost contemporary evidence about the price of tools comes from the *Pax* of Aristophanes, 421 B.C. The sickle-maker, after the conclusion of peace, describes his blessings as follows (1198-1206):

⁴¹ Computed from sales of 290, 70 and 60 plinthoi, respectively.

⁴² Cf. *Economic Survey*, V, p. 209. For prices of transporting and laying brick in Egypt, see A. C. Johnson in vol. II, p. 472.

¹ Pp. 169-234. A much more abbreviated discussion, containing no reference to Greek words, may be found in G. M. A. Richter, *The Sculpture and Sculptors of the Greeks*, rev. ed., New Haven, 1950, pp. 143 ff.

ὥς πρὸ τοῦ

οὐδεὶς ἐπρίατ' ἂν δρέπανον οὐδὲ κολλύβον,
 νυνὶ δὲ πεντήκοντα δραχμῶν ἐμπολῶ.
 ὁδὶ δὲ τριδράχμους τοὺς κάδους ἐς τοὺς ἀγρούς.
 ἀλλ' ὦ Τρυνγαῖε τῶν δρεπάνων τε λάμβανε
 καὶ τῶνδ' ὅ τι βούλει προῖκα· καὶ ταντὶ δέχου.
 ἀφ' ὧν γὰρ ἀπεδόμεθα κάκερδῆναμεν
 τὰ δῶρα ταντί σοι φέρομεν ἐς τοὺς γάμους.

During the war the craftsmen could not get the smallest coin (*chalkous*: 1/8 obol) in exchange for agricultural tools. After the peasants returned to their farms with the coming of peace, the sickle became worth 50 drachmas and the kados 3. This price of 50 drachmas is the one given in all manuscripts and is adopted by many editors.² Apart from the metrical considerations of the quantity of the alpha in *drachmon*, it seems difficult to reconcile the 50 drachmas for the sickle with the 3 drachmas for the kados. The latter was a large jar often used for storage purposes, although smaller than the pithos.³ In *I.G.*, XI, 2, 203, line 44, and 219, A, line 39, two kadoi were repaired for 2 and 1½ drachmas, respectively.⁴ The two prices in the passage in the *Pax* can more easily be reconciled by adopting the emendation of five drachmas for the sickle.⁵

The impression given in our stelai is that after the resumption of the Peloponnesian War tools were not cheap in wartime. This appears, for example, from the price of a hoe, or mattock (*sminye*) which was sold for 3 drachmas 2 obols.⁶ This cannot have been far from the price in normal times.

1. ἀμαλλεῖον (V, 8).⁷ Band for binding sheaves. The word is defined in the lexicographers as σχοινίον, ἐν ᾧ τὰς ἀμάλλας δεσμεύουσι.⁸ Synonyms are given as οὐλόδετον and ὠρόδεσμος. Previously, the earliest occurrence of our word was in Kallias, writer of old comedies.⁹

Photius states that the sheaf-band was made of straw, but our price (one drachma one obol) indicates that the material was expensive. Ropes were made out of esparto

² Also Ehrenberg, *People of Aristophanes*², p. 224, note 8.

³ Aristophanes, *Eccl.*, 1004; Hesychius, *s.v.*

⁴ These may well have been of metal.

⁵ So Van Herwerden, Van Leeuwen, Sharpley, and Coulon in their texts of the play, following Elmsley and Meineke.

⁶ III, 12.

⁷ In our list, the aspirate was added. For other examples of the addition of the *spiritus asper*, particularly from the later part of the fifth century, see K. Meisterhans, *Grammatik der attischen Inschriften*,³ p. 85.

⁸ See *Thesaurus Graecae Linguae*, *s.v.* ἀμάλλιον, and references there cited.

⁹ Demiánczuk, *Supplementum Comicum*, Krakow, 1912, p. 28: ὅτ' ἀμαλλεῖω παῖς ὧν ἐδέθην.

grass,¹⁰ papyrus,¹¹ hemp,¹² ox-hide¹³ and hair. The price of hair twisted into rope is given in the Edict of Diocletian as 10 denarii per pound.¹⁴ Hemp was priced at 4-6 denarii per pound.¹⁵

2. ἄξων (II, 127). Axle.¹⁶ Various types of axles, including those rigidly attached to the framework of the wagon and those which revolved with the wheels, are discussed by Miss H. L. Lorimer in her illustrated article, "The Country Cart of Ancient Greece."¹⁷ More recently, the word has been studied by Thiel in connection with the *axon* mentioned in Hesiod, *Erga* 424.¹⁸ He discusses the possibility that the word refers to the pivot or the axis of a pounding-machine,¹⁹ to which Polybios in I, 22, 5-7, compares a boarding-bridge (*corvus*).²⁰ Since Hesiod refers to a cart in line 426, it seems difficult to interpret the axon of line 424 as anything other than a cart-axle. It is true that the enumeration of parts of the wagon is interrupted by mention of a mallet in line 425, and the length of the axle is given as seven feet. Hesiod, however, is referring to the season for cutting wood, and the mallet is to be made from the timber hewn at the same time as that for the axle. The width of the cart is explained by the fact that the wagon had to be low and of broad axle to prevent its overturning.²¹ The Hesiodic wagon was doubtless a one-axle vehicle.²²

We have preserved at least one Athenian price for axles. The epistatai of Eleusis in recording the building account for the temple of Demeter and Persephone in the year 327/6 B.C. listed the price of 5 drachmas apiece for 17 new axles. The total was

¹⁰ Pliny, *H.N.*, XIX, 29-30. The plant *spartum* was found in Spain and Africa. Pliny comments on the costliness of this type of rope.

¹¹ See, for example, Theophrastos, *H.P.*, IV, 8, 4.

¹² Theophrastos, *H.P.*, IX, 2, 1. The hemp-ropes of Syria and Babylonia were well known at least in Roman times. See F. M. Heichelheim, "Roman Syria," *Economic Survey*, IV, p. 131.

¹³ *Od.*, II, 426.

¹⁴ Col. XI, 3.

¹⁵ Col. XXXII, 16-17.

¹⁶ For other meanings of *axon*, see, for example, Robinson, *Olynthus*, X, p. 295.

¹⁷ *J.H.S.*, XXIII, 1903, pp. 132-151. Cf. E. Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Currus*, p. 1635; and F. Studniczka, "Der Rennwagen im syrisch-phönikischen Gebiet," *Jahrbuch*, XXII, 1907, pp. 147-196.

¹⁸ *History of Roman Sea-Power before the Second Punic War*, Amsterdam, 1954, pp. 107 ff.

¹⁹ For *axon* meaning 'door-pivot' see Robinson, *Olynthus*, XII, p. 455 and the references there given. Cf. also the study of the Solonian *axones* in *A.J.A.*, XLV, 1941, especially pp. 354-355.

²⁰ *Op. cit.*, p. 110.

²¹ Paley in his edition of Hesiod (*ad* line 424) quotes Tzetzes' observation: "Hesiod calls the seven-feet axle very convenient in size: I should call it very inconvenient, though no great farmer myself." Thiel (*op. cit.*, p. 108) wrote as follows: "Personally I have never seen a cart with an axle of seven feet in my life and, though it is a rather rash supposition, it is tempting to suppose that such a cart has never existed anywhere, certainly not in ancient Greece: think of the Greek roads." But the normal interval between wheel ruts in ancient roads in Greece is *ca.* 1.50 m., i. e. presumably five feet. The axle, of course, would have to be considerably longer.

²² Cf. A. W. Mair, *Hesiod*, Oxford, 1908, pp. 155-158.

85 drachmas.²³ In the Edict of Diocletian (Col. XV, 1-2), the maximum price for an axle is given as 250 denarii.

3. γαλεάγρα (II, 124). Weasel-trap.²⁴ Theophrastos states that the *galeagra* was made of elm wood.²⁵ For illustrations of various types of cages, see E. Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Cavea*, 981; for illustrations of various hunting nets, including a trap for hares, see E. Pottier in Daremberg-Saglio, *Dictionnaire*, s.v. *Rete*.

It may be noted that there is another type of *galeagra*, not defined in Liddell-Scott-Jones, which would be not unsuited to our word in its present context. This is a meaning for *galeagra* in the sense of 'olive press.' The word occurs in the Arabic text of the *Mechanica* of Hero of Alexander. L. Nix and W. Schmidt in vol. II of the Teubner edition (Leipzig, 1900) have given a German translation.²⁶ Hero in book III, 16-17, describes two types of *galeagra*. They are illustrated by Nix and Schmidt on pp. 236 and 242. Each type was in the shape of a box; so doubtless resembled a 'trap.' The *galeagra* is studied in detail by A. G. Drachmann, "Ancient Oil Mills and Presses," *Danske Videnskabernes Selskab*, Arch-kunst. Meddelelser, I, 1932, pp. 60-62, 150.

'Olive press' has not been offered as the meaning for our *galeagra*, because Hero, who is dated in the second or first century B.C., speaks of the press as something new. Moreover, this agrees with Pliny, who is probably describing the *galeagra* in the following language: "sive in sportis prematur, sive ut nuper inventum est exilibus regulis pede incluso."²⁷ The oil press *galeagra* was a late development. In addition, Cato, who died in 149 B.C., in his sections on grape and olive presses in the *De agricultura* did not know of such a press. We cannot, therefore, apply the meaning to a fifth-century word.

4. δίκελλα (II, 131). Two-pronged hoe or mattock.²⁸ For illustration of the instrument, dating from the Roman period, see Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Bidens*; and H. Thedenat, s.v. *Raster*.²⁹ For a description of the use of the

²³ *I.G.*, II², 1673, line 32. Cf. Kirchner *ad loc.*

²⁴ This is the literal meaning; see Pollux, X, 155. The word is also used for an iron cage for ferocious beasts; see Diogenes Laertius, V, 5, 216; Athenaeus, XIV, 616 c; and E. Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Cavea*, 981.

²⁵ *H.P.*, V, 7, 6. Cf. Blümner, *Technologie*, II, p. 291, note 5.

²⁶ An earlier publication of Hero's text with French translation is that of D. de Vaux in *Journal Asiatique*, Ninth Series, vols. I and II, 1893. For *galeagra*, see II, pp. 164 ff.

²⁷ *H.N.*, XV, 5.

²⁸ For the etymology of the word, see Buck, *Dictionary*, p. 501. Cf. A. Walde, *Vergleichendes Wörterbuch der indogermanischen Sprachen*, ed. J. Pokorny, Berlin and Leipzig, 1927-32, I, p. 436, II, p. 591; and Schwyzer, *Gr. Gram.*, I:2, p. 475, note 2.

²⁹ Cf. the illustration in R. Billiard, *L'agriculture dans l'antiquité d'après les Géorgiques de Vergile*, Paris, 1928, p. 58. For two-pronged hoes from Egypt, see Petrie, *op. cit.*, plate XIX.

instrument, see Aeschylus, fragment 196 N. In Aristophanes, *Pax*, 566-570, the *dikella* is mentioned with the *sphyra* and *thrinax* as a tool of the farm. Its purpose was to break up the soil.

The price of a *dikella* in Athens in 327/6 B.C. was two drachmas. This figure comes from the accounts of the epistatai of Eleusis, who listed twelve *dikellai* of a stater and a half each. The stater is given as 8 obols,⁸⁰ and the total payment, as restored by Kirchner, was 24 drachmas. In the Edict of Diocletian, the maximum price for a *dikella* is given as 12 denarii (Col. XV, 43: reading of the Geronthrean stone).

The reason for the occurrence of the word *dikella* in an inscription relating to building and in particular to stone-quarrying (*I.G.*, II², 1673) is not entirely clear.⁸¹ A hoe is hardly suitable in this context. The two prongs of the *dikella* were not always parallel. Like *skapane*, the word was used as well for an instrument with transverse hoe-like blades.⁸² Since the meaning of *κελλα is to 'cleave' or 'split',⁸³ our instrument may be the 'trimming-hammer' described in Casson, *op. cit.*, pp. 171-173, as the tool used in the earliest stages of stonework. There is no specific reference to this tool, and its name is not known. One end was flat, the other pointed, not unlike the modern geological hammer. Casson has reported the marks of such a tool at an ancient quarry. Very similar to this tool are the miner's pickaxe, illustrated in Petrie, *op. cit.*, plate XIV, no. 74, which had a point to split the stone and an axe for trimming, and the quarryman's pick, illustrated in Petrie, plate XIV, nos. 71-72, in the shape of a modern stone-pick. The stonecutter's mallet,⁸⁴ rectangular in shape with flat heads, which is illustrated in Richter, *op. cit.*, fig. 439, and the similar instrument with longer handle which is depicted in the quarrying scenes in the Vatican manuscript of Vergil,⁸⁵ are other quarrying instruments with transverse blades.

5. δρέπανον (II, 128). Pruning-hook. *Drepanon* is followed in the next line by the word ἀμπελοργόν, so spelled in the Attic script. I have interpreted this latter word, not as the genitive plural of the noun ἀμπελουργός which means a vineyard worker (vinitor)⁸⁶ nor as the new name of a tool, but as an adjective, synonymous in meaning with ἀμπελουργικός, 'of' or 'for culture of vines,' modifying *drepanon*. In the records of Brauronian Artemis, the two words seem to be similarly joined (*I.G.*, II², 1526). For the formation of the adjective, cf. ἀνθεμουργός, -όν and similar adjectives listed in Buck and Petersen, *Reverse Index*, pp. 629-631. According to Hesiod, *Scutum Her-*

⁸⁰ *I.G.*, II², 1673, line 50. Cf. Kirchner's note *ad loc.*

⁸¹ For bibliography on the tools of the stone worker, see Richter, *op. cit.*, p. 143, note 55.

⁸² See Buck, *loc. cit.*

⁸³ See Boisacq, *Dictionnaire*⁴, s.v.

⁸⁴ For words for hammer, see Blümner, *Technologie*, II, pp. 194 ff.

⁸⁵ Illustrated in Daremberg-Saglio, *Dictionnaire*, I, p. 381, fig. 465; and Blümner, *Technologie*, III, p. 83.

⁸⁶ See Daremberg-Saglio, *Dictionnaire*, s.v. *Vinitor*. The *ampelourgos* was usually a slave.

culis, 292, a drepanon was used by vintagers, and in Plato, *Republic*, 333 d, the drepanon is connected with the art of vine-dressing. Homer in *Od.*, XVIII, 368, calls the sickle *εὐκαμπές*, 'well-curved.' Hesiod applies to *ἄρπη* (*Theog.*, 175), which is the same instrument as the drepanon of line 162, the epithet *καρχαρόδους*; hence the blade must have had a serrated edge.

Metal pruning-hooks discovered in American excavations in Athens are published by D. B. Thompson in *Hesperia*, VI, 1937, p. 421, fig. 18; and by O. Broneer in *Hesperia*, VII, 1938, p. 210, fig. 44, no. 215. For other examples, reference may be made to D. M. Robinson, *Olynthus*, X, p. 340, note 21.

The general meaning of drepanon is 'sickle,'³⁷ but the word was also used for the scythes on the Persian chariots.³⁸ According to Reinach,³⁹ the shape and size varied, but the drepanon was distinguished from an ordinary knife by having a curved cutting surface. Reinach gives illustrations of the object.⁴⁰ More recently, H. J. W. Tillyard has published a group of inscriptions from the Spartan Artemision in several of which a socket in the shape of a sickle was cut into the stone.⁴¹ Tillyard states that an iron drepanon was the prize for boys' contests and that it was offered to Artemis.⁴² One of Tillyard's fragments (no. 17) is part of a metrical inscription of Roman date and the reference to drepanon is plain.

The price of a drepanon is given by Aristophanes (Coulon's text) as five drachmas in time of peace.⁴³

6. *θερμανστίς* (I, 97, 98). Kettle for boiling water, tongs. The word is defined by Liddell-Scott-Jones as 'tongs' or 'kettle.' The latter definition comes from Pollux, X, 66. In listing the pots used for heating water, he gives *θερμαντήρ*, *θερμανστρίς*, and follows these with *χαλκία θερμαντήρια* and *λέβητες*. Our word in Stele I immediately follows the entry *χαλκίον θερμαντήριον* of line 96, which in turn is preceded by *λέβης* in lines 91-92. This position, then, suggests that the meaning of our word is 'kettle.' See Amyx in "The Attic Stelai, Part III," to appear subsequently. Pollux gives the form of our word as *θερμανστρίς*. For the loss of the liquid, see Schwyzler, *Gr. Gram.*, I, p. 260.

For ancient tongs used by metal workers, reference may be made in particular to Blümner, *Technologie*, II, p. 193. For an illustration of iron tongs, see G. R. Davidson, *Corinth*, XII, no. 1444.

³⁷ See Buck, *Dictionary*, p. 507.

³⁸ Xenophon, *Anab.*, I, 7, 10.

³⁹ Daremberg-Saglio, *Dictionnaire*, s.v. *Falx*.

⁴⁰ Cf. also Beazley in Caskey-Beazley, *Attic Vase Paintings in Boston*, Part II, London and Boston, 1954, p. 72.

⁴¹ *B.S.A.*, XII, 1905-1906, pp. 351-393.

⁴² *Ibid.*, pp. 384-386.

⁴³ *Pax*, 1201. Cf. above, p. 288.

7. *θρῖναξ* (II, 119). Three-pronged fork. An old gloss states that this agricultural instrument sometimes had five, not three, prongs.⁴⁴ Hesychius (*s.v.*) defines *thrinax* as a grain shovel. J. E. Harrison has published an illustration of a modern Cretan *θυρνάκι*, a winnowing instrument in use today,⁴⁵ which must closely resemble the ancient instrument. It is a combination of a fork and shovel. The prongs would help to pick up the mixed mass of stalks and grain, the broad curved surface would be an excellent shovel. The *thrinax* was usually of iron, sometimes of wood. In Aristophanes, *Pax*, 566-570, reference is made to the *thrinax* together with the *sphyra*, 'mattock.' These were the two tools used to clear the space between rows of vines and fruit trees. In addition to the articles of J. E. Harrison, reference may be made to Blümner, *Technologie*, I², p. 9.

The price of the *thrinax* in the Edict of Diocletian (Col. XV, 46) is given as 8 denarii.

8. *κάλως* (I, 214). Rope, cord.⁴⁶ Rope-making is discussed by G. Lefaye in Daremberg-Saglio, *Dictionnaire*, *s.v.* *Restiarius* and *Restis*.⁴⁷ These articles contain, however, no reference to *kalos*. Our entry reads *κάλω ἵππείω δύο*. It occurs after an entry for bedstead and is followed in three lines by entries for cushions, pillows and bedspreads. Moreover, Pollux, in referring to the property of Alkibiades, lists *kalos* among the bands and straps which make up the girth of the bedstead.⁴⁸ Our line may be translated 'two horsehair cords' of bedsteads.⁴⁹ For *ἵππειος* in the meaning of 'horsehair,' see Homer, *Il.*, XV, 537.

In the fragmentary accounts of the epistatai of Eleusis for the year 327/6 B.C., a payment was made to a metik Theokles for *kalos* for a *katagogis*, which may have been a lowering device. The price paid for the *kalos* is given as 19 drachmas, but the quantity is not preserved.⁵⁰ The next entry in this inscription was for *strophos*, or twisted cord. To the metik Kallianaxis for three talents of *strophe* the sum of at least 90, but not more than 100 drachmas, was paid. The entry preserves the sum of 90 drachmas, but the figures may have continued onto the left part of the next line which is lost. The weight of a talent is conventionally given as 36.86 kg.⁵¹ Three talents, then, would equal roughly 244 lbs. The price per pound, depending on whether we used the price of 90 or 100 drachmas, would be in the neighborhood of 2½ drachmas.

⁴⁴ *Cyrelli Glossarium*, *s.v.* (ed. M. Schmidt, *Hesychius*, vol. IV, Jena, 1862, p. 342).

⁴⁵ *J.H.S.*, XXIII, 1903, p. 303. Cf. *J.H.S.*, XXIV, 1904, pp. 246-249.

⁴⁶ See Buck, *Dictionary*, pp. 548-549. The gradation by size in the English use of 'rope,' 'cord,' 'string,' 'twine' was not distinguished in Greek, which used *κάλως*, *σπάργον* and *σχόινος*, the last for rope made by plaiting rushes together.

⁴⁷ Cf. Blümner, *Technologie*, I², p. 295.

⁴⁸ X, 36. See Aristophanes, *Aves*, 816 and the scholia on this line. For a description of such bedsteads, see P. Girard in Daremberg-Saglio, *Dictionnaire*, *s.v.* *Lectus*, p. 1015 b.

⁴⁹ Cf. A. Wilhelm, *Jahreshefte*, VI, 1903, p. 239; C. Ransom, *Couches and Beds*, p. 109.

⁵⁰ *I.G.*, II², 1673, lines 18-19.

⁵¹ *Oxford Classical Dictionary*, *s.v.* *Weights*.

In the Edict of Diocletian (Col. XI, 3), the price of hair twisted into rope was 10 denarii per pound. The cost of a piece of rope for hanging a person is known to have been an obol.⁵²

9. *καρκίνος* (II, 126). Forceps, crane. The etymological meaning of *karkinos* is crayfish or crab,⁵³ from which the word has taken on many derivative meanings,⁵⁴ including a type of women's shoe and a sign in the zodiac. As a tool, at least two meanings are attested for *karkinos*: 'compass' and 'forceps, a pair of tongs.'

Photius defines *karkinos* as 'forceps' and this meaning of the word occurs in Euripides, *Cyclops*, 609; *Anth. Pal.* 6, 117, and Athenaeus, X, 456 d. This instrument is illustrated in Blümner, *Technologie*, II, pp. 192-193; and by S. Reinach in Daremberg-Saglio, *Dictionnaire*, s.v. *Forceps*. The later meaning of compass occurs in Sextus Empiricus, *M.*, X, 54, for which E. Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Circinus*, has given illustrations.

Pollux, however, refers to a *karkinos* as listed in the Attic Stelai. He states (X, 148): ἐν δὲ ταῖς Ἀττικαῖς στήλαις ἀναγράφεται πρίων λιθοπρίστης καὶ καρκίνος λίθους ἔχων (v.l. ἐλών; Bekker ἔλκων). Pollux clearly had in mind the machine for raising weights which is commonly called a crane; for he continues, εἶποις δ' ἂν καὶ μηχανὴν λιθαγωγόν. It is to be noted, moreover, that Pollux lists *karkinos* under the heading of builders' tools (οἰκοδόμων σκεύη). Such a machine is described with illustrations in Blümner, *Technologie*, III, pp. 111-131.

It is possible that Pollux or his source had before him some other quotation from the Attic Stelai which referred more specifically to stonework than our preserved reference in Stelai II. His meaning, however, is not inappropriate for a word inscribed on the same line with *toros*.

10. *κλίμαξ* (II, 27, 28; V, 85).⁵⁵ Ladder. The word was used both for staircase and for ladder.⁵⁶ In some instances the staircase was probably no more secure than the ordinary ladder. Lysias tells of the wife who was permitted to sleep on the first floor with her small child in order to avoid the risk of falling down the staircase when she went to tend it.⁵⁷ In *I.G.*, II², 1668, line 84, reference is clearly made to a wooden stairway for the arsenal of Philo. The context of our word, however, requires the

⁵² Lucian, *Timon*, 131.

⁵³ Boisacq, *Dictionnaire*⁴, s.v.

⁵⁴ See *Thesaurus Graecae Linguae*, s.v.

⁵⁵ The form *κλίμα[χς]* was used in Part I (p. 266), but it may be noted that *κλιμά[κιον]* is also a candidate, particularly since Pollux (X, 178) associates it with our Stelai.

⁵⁶ In architectural contexts, the word *klimax* has other meanings. These have not been considered in this section. In the Erechtheion accounts (*I.G.*, I², 372, 373) the diminutive means a coffer or wooden frame with openings for coffers in ceilings. See J. M. Paton, *Erechtheum*, Cambridge, 1927, pp. 365-66. Cf. Robinson, *Olynthus*, XII, p. 462, and *I.G.*, XI, 2, 144 A, line 42. In building inscriptions from Epidaurus *klimax* means, according to Ebert (*Fachausdrücke*, pp. 49, 60), the screen or railing (Gitter). Prices for the latter are contained in *I.G.*, IV², 102.

⁵⁷ Lysias, I, 9.

meaning of 'ladder.' In one case *klimax* follows the words for millstone and pestle; in the other, those for millstone and mortar. For illustrations of ancient ladders, see G. Nicole, Daremberg-Saglio, *Dictionnaire*, s.v. *Scalae*.

In Stele II, 27, the price of a *klimax* is clearly inscribed as 8½ drachmas. The price for the second ladder in line 28 is only partially preserved in the form of the upper part of two vertical strokes. The sum could not be more than two drachmas. The marked difference in price may be explained by the condition of the articles. There are numerous references to *klimakis*, 'ship's ladder,' in the Athenian naval inventories (*I.G.*, II², 1604 ff.), but the entries do not indicate prices.⁵⁸ For comparative purposes, however, reference may be made to prices for other wooden objects. Scantling for oars (*kopeis*), for example, is stated by Andokides (II, *On his Return*, 11) to have been worth five drachmas apiece at Samos in 411 B.C. The official price for this wood for making oars was three drachmas apiece in 324 B.C.⁵⁹ Oars of poor quality, which had not stood proof, averaged two drachmas apiece in 346/5 B.C.⁶⁰ The pole for sounding the bottom of the sea was worth at least seven drachmas in 377/6 B.C.⁶¹ In the Edict of Diocletian (Col. XIV, 6), the price of an ordinary large ladder of 30 rungs is 150 denarii.

11. κρεάγρα (II, 133). Meat-hook. The main article on this word in Daremberg-Saglio, *Dictionnaire*, is that of Saglio, s.v. *Fuscinula*; it is also discussed by Blanchet, s.v. *Harpagο*, and by Reinach, s.v. *Veru*. Robinson devotes a special section to the *kreagra* and gives what appears to be the most complete bibliography.⁶²

The *kreagra* was made of bronze or iron, and had a varying number of prongs. It is most often grouped with kitchen utensils and is mentioned in connection with meats.⁶³ The scholiast on Aristophanes, *Equites*, 772, describes it as shaped like a hand with the fingers slightly curved. As Rogers noted (*ad Aristophanes, Eccl.*, 1002) the *kreagra* was strictly speaking a 'flesh-hook,' but the term was applied figuratively to any grappling-hook for fishing up articles from the depths, as, in the *Ecclesiastusae* passage, a bucket from a well. This is another of our items which is mentioned in Pollux, X (98).

One specimen was found at Olynthos, and Robinson lists similar implements which have been found throughout the ancient world. There are several representations on vases. The inventories of the Treasure of Athena include two *kreagrai*.⁶⁴

⁵⁸ It may be mentioned that in the Delian accounts of the *hieropoioi* of the period 314-250 B.C. prices for making or repairing *klimakes*, but along with other objects, are contained in *I.G.*, XI, 2, 144, line 42; 165, line 9; and 287 A, line 97.

⁵⁹ *I.G.*, II², 1631, line 372; A. Böckh, *Urkunden über das Seewesen*, Berlin, 1840, p. 114.

⁶⁰ *I.G.*, II², 1622, lines 390-397.

⁶¹ *I.G.*, II², 1604, line 29. See Böckh, *op. cit.*, p. 126.

⁶² *Olynthus*, X, pp. 198-199.

⁶³ Cf. Blanchet in Daremberg-Saglio, *Dictionnaire*, s.v. *Harpagο*, 12a.

⁶⁴ *I.G.*, II², 1425, line 416.

12. ξύλα καύσιμα (V, 7). Firewood. *Xylon* is used for cut wood in the sense of 'firewood,' 'timber,' and is possibly derived from ξύω, 'scrape.'⁶⁵ The word occurs in numerous places in the Delian accounts of the *hieropoioi*.⁶⁶ It is usually side by side with *klematides*, 'brushwood,' and *rhymos*, 'log.'⁶⁷ Such firewood was commonly used in sacrifices.⁶⁸

Many prices of xyla are preserved from the records of Delos, where of course the wood had to be imported. Indeed, the scarcity of wood on Delos is attested by a Delian law from the last part of the third century which regulated the sale of wood and charcoal.⁶⁹ The weight of the wood in talents is frequently given as well as the price. A talent represented a man's load and weighed over 80 pounds avoirdupois.⁷⁰ The Delian evidence for a period of 80 years is presented in the following table, based in part on that of G. Glotz in *Journal des Savants*, XI, 1913, p. 23.

PRICE OF FIREWOOD AT DELOS

Date	Price per Talent	Maximum	Minimum	Inscription
ca. 310		1 dr. 2 ob.	1 dr. 1½ ob.	I.G., XI, 2, 142, lines 60-61
ca. 305	1 dr. 1½ ob.			XI, 2 144 A, line 29
300	1 dr. 1½ ob.			147 A, line 12
279	1 dr. 2 ob.			161 A, line 108
274	1 dr. 2 ob.			199 A, line 49
269	1 dr. 1 ob.			203 A, lines 58, ⁷¹ 59
268		1 dr. ⅓ ob.	1 dr.	204, lines 46, 49, 63
267	1 dr. 2 ob.			205 Bd, line 14
ca. 265		1 dr. 1 ob.	1 dr.	219 A, lines 15, 49, 55
258		1 dr. ¼ ob.	4 ob.	224 A, lines 30, 31
250		1 dr. 1 ob.	4 ob.	287 A, lines 45, 50, 52, 61, 65, 67, 73, 80, 81, 82
ca. 245		1 dr. 2¼ ob.	1 dr. 1¾ ob.	Insc. Délos, 290, lines 48, 73, 82, 85, 94, 99
After 248	1 dr. 1 ob.			291, line 29
231		1 dr. 1 ob.	1 dr.	316, lines 100, 104, 110

⁶⁵ See Boisacq, *Dictionnaire*,⁴ s.v. *Xylon* for this and other possibilities. Cf. Buck, *Dictionary*, pp. 49-50. In the Erechtheion building inscriptions, the word sometimes means 'beam,' and it is so translated in G. P. Stevens, *Erechtheum*, p. 329. Elsewhere in the same inscription (VII, line 7: p. 320), it is applied to the moulding. In *Jahreshefte*, VIII, 1905, p. 11, Wilhelm has defined *xyla* ("das frische Holz der Stämme") in distinction to various other words referring to wood.

⁶⁶ Of equal frequency is the use of the word *xyla* in the sense of 'timber' or 'lumber.' The type of lumber (oak, pine, etc.) is usually specified. It should be noted that under the general heading of wood, Pollux (VII, 109) makes the subdivisions of *kausima* and *ergasima*, 'wood that can be worked.'

⁶⁷ See, in particular, E. Schulhof and P. Huvelin, *B.C.H.*, XXXI, 1907, pp. 53 ff.

⁶⁸ See Kirchner *ad* I.G., II², 1672, line 124.

⁶⁹ Insc. Délos, 509. See J. A. O. Larsen, "Roman Greece," *Economic Survey*, IV, pp. 352-354.

⁷⁰ In the Attic-Euboic standard, a talent was 36.86 kg. A kilogram is equal to 2.2046+ pounds. It is more probable, however, that a market talent of 39.25 kilograms was used; see Larsen, *op. cit.*, p. 295. This equals a little over 86½ pounds.

⁷¹ The rate is given as 1 drachma 1 obol per talent. The actual price paid for 50 talents was 60 drachmas 4 obols which would be at the rate of 1 drachma 1¼+ obols per talent.

In later Delian accounts, prices seem to amount consistently to slightly more than one drachma per talent.⁷² In 173 B.C., however, there was a rise to 2 drachmas 1½ obols.⁷³ A survey of the price of wood after 250 B.C. may be found in Larsen, *op. cit.*, p. 395.

One would judge from the *Acharnenses* of Aristophanes that there was a good supply of wood for fuel in Attica in the fifth century. A. Böckh has concluded that this was beechwood.⁷⁴ Men and asses carried wood and faggots into the city.⁷⁵ At the beginning of the fourth century, firewood for a small sacrifice was purchased according to the fixed tariff for two obols.⁷⁶ According to [Demosthenes], XLII, *Against Phainippos*, 7, Phainippos daily sent six asses laden with firewood from his place on Kytheros into Athens. Phainippos received more than twelve drachmas per day; so the burden of wood for an ass was worth two drachmas. The maximum of firewood an ass could carry on its back has been estimated at 70 pounds.⁷⁷ This might be a maximum for long distances; on a short haul a donkey could certainly carry more.

In 329/8 B.C., a year which was inflationary for foodstuffs, one sale of wood is recorded at the price of 1 drachma 3 obols per talent.⁷⁸

13. ξύλα τετράγωνα (VI, 39). Wood of squared deal. This combination of words occurs in Pollux, IV, 163; Theophrastos, *H.P.*, V, 1, 1; Polybios, V, 89, 1; and Plutarch, *Mor.*, 210 E. In building inscriptions the combination is very common: Attica, *I.G.*, I², 313, lines 99-101; Epidauros, *I.G.*, IV², 108, line 162; 109, II, lines 21, 99, 143, 159, etc.; 115, line 23; Chalkis, *I.G.*, XII, 9, 907, line 26. Similarly, wood was sometimes sold as *strongylos*, or unsquared.⁷⁹ In most of these entries the wood was sold by the wagonload.

With regard to lumber, it may be noted that large timber for building had to be imported into Athens from great distances.⁸⁰ Even beams and smaller wood were brought in by sea.⁸¹

14. ὀκίστιον (II, 120). Harrow. This word, otherwise unknown in Greek, occurs in our list after words for the farm implements, shovel and fork; so it was

⁷² For prices of firewood in Egypt, see the table of A. Segrè, *Circolazione monetaria*, pp. 156-157.

⁷³ *Insc. Délos*, 456 B, lines 11-12.

⁷⁴ *Staatshaushaltung der Athener*³, I, p. 126.

⁷⁵ Pollux, VII, 109.

⁷⁶ *I.G.*, II², 1356, lines 3 and 18. For other prices of wood for sacrifices, see *Hesperia*, VII, 1938, p. 5, lines 87-93 (3-10 drachmas).

⁷⁷ Michell, *Ec. of Anc. Greece*, p. 72.

⁷⁸ *I.G.*, II², 1672, lines 124-125.

⁷⁹ *I.G.*, IV², 109, II, line 135.

⁸⁰ Thucydides, IV, 108; Xenophon, *H.G.*, VI, 1, 11. Cf. E. C. Semple, *The Geography of the Mediterranean Region*, London, 1932, Chap. XI, especially p. 276.

⁸¹ Demosthenes, XXI, *Against Meidias*, 167.

suggested in Part I that it might be cognate with Latin *occa*,⁸² hence derived from *IE* **ak* (meaning 'sharp, pointed').⁸³ Our word would then mean 'harrow.' It would also be cognate with *ὀξίνα*, known only from Hesychius,⁸⁴ which is given by Liddell-Scott-Jones as being probably a Doric feminine. The description of the process of harrowing, drawn from Roman sources, is given in Daremberg-Saglio, *Dictionnaire*, s.v. *Rustica res*, p. 923 b, and in R. Billiard, *L'agriculture dans l'antiquité d'après les Géorgiques de Virgile*, pp. 69-70. The instrument is discussed, but without illustrations, in the same dictionary s.vv. *Irpex* and *Crates*.

15. *ὄνος ἀλέτων* (II, 24, 238, 239; V, 83). Upper millstone.⁸⁵ The earliest use of this combination of words occurs in a fragment of the Gortynian laws (ca. 450 B.C.).⁸⁶ In a literary context, they are first found in Xenophon, *Anab.*, I, 5, 5. The lexicographers, including Pollux,⁸⁷ Hesychius,⁸⁸ and Suidas,⁸⁹ define the words as indicating the grinding stone which turned around.

The evolution of the grain mill is given in Blümner, *Technologie*, I² pp. 20-49,⁹⁰ and a rough chronology for the Greek mill has been worked out by Robinson and Graham, *Olynthus*, VIII, pp. 331-332. The earliest example of the revolving ass-driven type cited by Robinson and Graham was found in the ruins of Motya in Sicily, a city destroyed ca. 397 B.C. Only one example of the revolving type is represented at Olynthos, although numerous examples of the hand type of grain mill were discovered. Our inscription would seem to confirm the conjecture of Robinson and Graham that the ass-driven type was as early as the fifth century. A third-century Megarian bowl found at Thebes shows the hand type and the ass-driven type side by side.⁹¹ For numerous illustrations of the revolving mill, see W. Deonna, *Délos*, XVIII, pp. 131-135 and plates LI-LII.

Strabo has recorded that millstones were made in abundance on the island of Nisyros in the Sporades.⁹² Robinson and Graham have reported that stones from various sites in Greece were made of hard black porous lava, and they conjecture these were manufactured at Thera and shipped in trade all over Greece.⁹³

⁸² *Hesperia*, XXII, 1953, p. 258.

⁸³ See Buck, *Dictionary*, p. 504.

⁸⁴ Hesychius' definition is: ἐργαλείον τι γεωργικόν, σιδηροῦς γόμφους ἔχον, ἐλκόμενον ὑπὸ βοῶν.

⁸⁵ For the most complete documentation for this meaning, see Blümner, *Technologie*, I², p. 30, note 1. For a recent study, see Robinson, *Olynthus*, XII, p. 453.

⁸⁶ M. Guarducci, *Inscriptiones Creticae*, IV, Rome, 1950, 75 B, line 7.

⁸⁷ VII, 19.

⁸⁸ S.v. μύλη and ὄνος.

⁸⁹ S.v. μύλη and ὄνευον.

⁹⁰ Cf. A. Hug, *R.E.*, s.v. Μύλη, cols. 1064-1065.

⁹¹ M. Rostovtzeff, *A.J.A.*, XLI, 1937, p. 88, fig. 1. This bowl is also illustrated in Rostovtzeff, *Soc. and Ec. Hist. of Hell. World*, I, plate xxv.

⁹² X, 488.

⁹³ *Op. cit.*, p. 330. Similarly, T. Wiegand and H. Schrader, *Priene*, p. 394, note 1. Millstones of granite and other igneous stone existed.

The price of the upper millstone of Stele II, 239 is recorded as 7 drachmas 1 obol. In II, 24, the first numeral of the price is missing. Figures for 4 drachmas 2 obols are preserved, at least in part. The missing numeral is almost certainly the sign for five drachmas, which would give a total of 9 drachmas 2 obols. The price of the millstone in II, 238 is only partially preserved. The sum contained two numerals followed by the preserved signs of two obols. The two most likely restorations, approximating the other two totals, would yield sums of 6 drachmas 2 obols, or 10 drachmas 3 obols.

16. *πέδη* (II, 127). Brake. This word has previously been defined as 'fetter'; in plural, 'shackles.'⁹⁴ Most uses in the literature are metaphorical. In Stele II, the word is combined with *ἄξων*, 'axle.'

Earlier, I suggested that the meaning here was 'brake.'⁹⁵ The compound word *τροχοπέδη*, denoting a block of wood thrust between the spokes of a wheel, is known from Athenaeus, II, 99 c, and from Herodian, 467.⁹⁶ Drags in the form of oblong slabs of metal are also depicted in two bas-reliefs illustrated in Daremberg-Saglio, *Dictionnaire*, s.v. *Sufflamen*. These were clamped on the rim of the wheel.⁹⁷

17. *πέλεκυς* (I, 109). Axe.⁹⁸ The most complete bibliography is given by Reinach in Daremberg-Saglio, *Dictionnaire*, s.v. *Securis*, to which may be added that contained in Robinson, *Olynthus*, X, p. 342, note 29. Many iron axe-heads have been found in Greece. Illustrations of numerous types of axes from reliefs and vase-paintings are given by Blümner, *Technologie*, II, pp. 202-203. He notes that the *pelekys* was used mostly in woodwork, particularly by carpenters and shipbuilders. *Pelekys* indicated the two-edge axe; for the single-edge, the words *πέλεκυς ἑτερόστομος* or *ἡμιπέλεκκον* might be used.

18. *πτέον* (II, 119)⁹⁹ Winnowing-shovel.¹⁰⁰ The instrument is described by A. Jardé in Daremberg-Saglio, *Dictionnaire*, s.v. *Ventilabrum*; by E. Saglio, *ibid.*, s.v. *Pala*; and in greater detail in Blümner, *Technologie*, I², pp. 7-9. Special articles of Jane E. Harrison, "Mystica Vannus Iacchi,"¹⁰¹ include a study of the *ptyon*. She cites several examples on vases to which may be added those cited by Ure, *J.H.S.*, LXIX, 1949, pp. 18-24.

⁹⁴ See Liddell-Scott-Jones, s.v., and *Thesaurus Graecae Linguae*, s.v. For a description of such fetters, see Daremberg-Saglio, *Dictionnaire*, s.v. *Compes*.

⁹⁵ *Hesperia*, XXII, 1953, p. 259. Further study, however, has revealed no evidence to uphold the suggestion that this brake operated by friction against the axle.

⁹⁶ Ed. S. Pierson in Moeris, *Lexicon*, Leipzig, 1831, p. 345.

⁹⁷ For such a clamp found in Italy, see L. A. Milani, *Studi e materiali*, I, 1899, p. 138, fig. 42.

⁹⁸ Buck, *Dictionary*, p. 561.

⁹⁹ For the Attic form *pteon*, instead of the dialectical *ptyon*, see Schwyzler, *Gr. Gram.*, I, p. 183.

¹⁰⁰ Buck, *Dictionary*, p. 500; Boisacq, *Dictionnaire*⁴, p. 824; modern Greek uses *φτυάρι* for 'shovel.' Buck (p. 499) notes the difficulty of distinguishing among the ancient names of Greek digging implements.

¹⁰¹ *J.H.S.*, XXIII, 1903, pp. 292-324; and XXIV, 1904, pp. 241-254.

Eustathius described Homer's ἀθηρηλοιγός, 'consumer of chaff,' as a ptyon which he said was in shape like a hand.¹⁰² The shovel was used to toss up the grain against the wind. The wind carries the chaff to a distance and the heavier grain falls short in a mounting heap. The process is wholly unlike that described in relation to the winnow-basket, *liknon*.¹⁰³

The price of the ptyon in the Edict of Diocletian (Col. XV, 44) is given as 12 denarii.

19. ῥυμός (V, 11). Log.¹⁰⁴ The word has, among others, three meanings which might be appropriate in our inscription: the shaft of the plow, the pole of a chariot, and logs of wood for fuel. The *rhymos*, as the shaft of a plow, was composed of two parts, the beam, or curved piece (*gyes*), and the shaft attached to it (*histobocus*). A description is given by E. Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Aratrum*, p. 354 b. For illustrations, see Cloché, *Classes*, etc., p. 12 and plate VIII. Pollux,¹⁰⁵ Hesychius and Suidas¹⁰⁶ define the word as the pole of the chariot or cart, which went between the horses and by which the cart was pulled. This use is derived from the etymological meaning of the word. It is attested from Homer and Herodotos and is illustrated by A. Baudrillart in Daremberg-Saglio, *Dictionnaire*, s.v. *Jugum*, p. 665.¹⁰⁷

For the third meaning of *rhymos*, which is attested only in the inscriptions, the exact sense is not certain. This use is discussed by Schulhof and Huvelin (*B.C.H.*, XXXI, 1907, pp. 53-56); by Larsen (*op. cit.*, p. 354); and by Kirchner (*ad I.G.*, II², 1672, lines 124 and 307) who refers to Harzbecker's unpublished Leipzig dissertation, which is not available to me.¹⁰⁸ The word seems to be used for firewood and refers to larger pieces of wood than *xyla*. Since our word occurs only four lines below the entry ξύλα καύσιμα (V, 7), the third meaning would seem likeliest in this context.

Numerous prices for *rhymos* are preserved in the Delian accounts of the hieropoioi.¹⁰⁹ The word usually occurs side by side with *xyla*, *lampas*, 'torch' or 'faggot,' and *klematides*, 'brushwood.' Schulhof and Huvelin have noted that in the accounts of the archonship of Sosisthenes (250 B.C.)¹¹⁰ the price of *rhymos* in the singular was one obol; in the plural, two obols.¹¹¹ This rule cannot be applied strictly in this or in

¹⁰² *Ad Od.*, XI, 128 (p. 1675, 54-57) and *ad Il.*, XIII, 588.

¹⁰³ See J. E. Harrison, *op. cit.*, p. 302.

¹⁰⁴ For the etymology, see Boisacq, *Dictionnaire*⁴, s.v. ('that which is drawn'). For the meaning of *rhymos* in inventories, see above, p. 224, note 85.

¹⁰⁵ I, 146.

¹⁰⁶ s.v. *Rhymos*.

¹⁰⁷ Cf. Lübker, *Reallexikon*⁸, p. 1126a. In architectural contexts the word has sometimes been interpreted as meaning 'unsquared log.' See G. P. Stevens, *Erechtheum*, p. 354.

¹⁰⁸ Cf. also Dürrbach *ad I.G.*, XI, 2, 154, line 18.

¹⁰⁹ In the Delian inventories, on the other hand, *rhymos* regularly means 'row' or 'shelf.'

¹¹⁰ *I.G.*, XI, 2, 287.

¹¹¹ *Op. cit.*, p. 56.

other years. In line 57 of the accounts of Sosisthenes, the singular form is followed by the one obol sign and in line 48 the plural form by the signs for two obols. But in the present text of line 69, the plural form is followed by the signs for at least three obols. In the accounts of the year 279 (*I.G.*, XI, 2, 161) the singular rhymos cost $1\frac{1}{2}$ obols (A, line 112) and 2 obols (A, lines 89 and 100), the plural rhymoi $4\frac{1}{2}$ obols (A, line 94). In the accounts of a year shortly after 246 B.C.,¹¹² rhymos in the singular number is worth one obol in line 71, two obols in line 83. In the accounts of 231 B.C.,¹¹³ rhymos cost 6 obols (line 76) and 3 obols (line 77). The plural brought 6 obols (line 80) and 9 obols (line 87) in this same year.

In Stele V, the form is singular. From the position of the one preserved obol sign in the sales price column, it can be determined by comparison with the numerals in line 8 that the price for this log for firewood—if this description is correct—was at least two obols.

For at least one inscription which carefully regulated the sale of fuel (charcoal and wood), see *Insc. Délos*, 509. In Delos of course the wood had to be imported.

20. *σανίς* (II, 228). Board or plank. Our *sanis* in the singular number is listed in a miscellaneous group of tools and furniture items in Stele II. The meanings of this word often overlap those of *pinax*,¹¹⁴ and are fully as various; a *sanis* could be a picture,¹¹⁵ a public notice,¹¹⁶ or a chopping board;¹¹⁷ in Euripides, *Alcestis*, 967, it is the term used for the tables on which Orphic wisdom was preserved. Another meaning is ‘bench or seat,’ and since our *sanis* comes immediately after a *diphros*, this at first seems an interesting possibility. However, this usage can only be found in an inscription from Delphi from the fourth century B.C., where the *sanis* was a plank used for a bench,¹¹⁸ and in the seventh Mime of Herodas;¹¹⁹ so that we have no evidence of its existence in the fifth century. In Homer *sanides* are frequently double doors,¹²⁰ but the basic meaning in the singular is ‘plank,’ as distinct from ‘beam,’ which was usually called *ξύλα*.¹²¹ *Sanides* were the boards used in doors,¹²² gates,¹²³

¹¹² *Insc. Délos*, 290.

¹¹³ *Insc. Délos*, 316.

¹¹⁴ See above, pp. 250-253.

¹¹⁵ Dittenberger, *Syll.*³, 977a, line 10 (= *Insc. Délos*, 2085); Herodas, IV, 36.

¹¹⁶ Aristophanes, *Vespae*, 349, 848; [Demosthenes], XXV, *Against Aristogeiton*, 70; Lysias, XXVI, *Against Euandros*, 10; Pollux, III, 85; *I.G.*, I², 313, line 168; 374, line 190.

¹¹⁷ Diodorus, XII, 24.

¹¹⁸ *Delphes*, III, 5, no. 23, col. 1, line 62 (= Dittenberger, *Syll.*³, 244 B, line 62). Pomtow *ad* Dittenberger, *Syll.*³ takes the *sanides* to be a kind of triclinium; Bourguet describes them as: “trois planches servent de bancs.”

¹¹⁹ See Headlam *ad* VII, 5; however, this term has also been taken to mean a board on which shoes were displayed.

¹²⁰ *Il.*, IX, 583; XII, 453, 461; *Od.*, II, 344; XII, 121; XXII, 128; cf. Euripides, *Ores.*, 1221; Pollux, I, 76; IX, 35; X, 29.

¹²¹ See L. B. Holland, *A.J.A.*, XLV, 1941, p. 354.

or in a ship's deck,¹²⁴ the walls of a house,¹²⁵ a table top,¹²⁶ or a ceiling.¹²⁷ Since the item *sanis* stands in our list without description it should probably be given its simplest meaning of board or plank.

The price of the *sanis* was 2 drachmas 1 obol, 6 drachmas 1 obol, or 11 drachmas 1 obol. We have two comparative prices from nearly the same period in the Erechtheion accounts of 407/6 B.C.: in both the price of *sanides* (totalling six) is given as 1 drachma each.¹²⁸ In the former entry, the text includes the specification that the accounts were to be inscribed on the tablets. From the fourth century there is detailed information in the records of the temple at Eleusis: ¹²⁹ an elm *sanis* 10 feet by 10 fingers by 3 fingers cost 14 drachmas; another 10 feet by ½ foot by one palm cost 13 drachmas 3 obols; one 16 feet by 3 palms by 6 fingers cost 20 drachmas 2 obols; one 9 feet by ½ foot by 1 palm cost 9 drachmas, and so on. In the Delian records of the hieropoioi of the period 314-250 B.C., the purchase of *sanides* for tables, stands, etc., is several times mentioned. *Sanides* of lime wood sold at 5, 8, and 8½ drachmas each,¹³⁰ those of elm at 11½ drachmas.¹³¹ Another entry refers simply to a plural number of *sanides* at 12 drachmas.¹³² Since the epigraphical evidence clearly shows that the price of the *sanis* depended on the size and type of wood, the price in our entry, where the word lacks a descriptive adjective, cannot be determined.

21. *σκαλῖς* (II, 125). Hoe.¹³³ This instrument is described by S. Dorigny in Daremberg-Saglio, *Dictionnaire*, s.v. *skapheion*. Reference to *skalis* occurs in *I.G.*, II², 1424a, line 391; and 1548. For illustrations of ancient hoes, see Robinson, *Olynthus*, X, pp. 343-344 and plate CVII.

22. *σμυνή* (II, 130; III, 12). Hoe or mattock.¹³⁴ The instrument is described with illustrations by E. Saglio, in Daremberg-Saglio, *Dictionnaire*, s.v. *Bidens*.¹³⁵ For references to more recent published illustrations of ancient hoes, see Robinson, *Olyn-*

¹²² *Olynthus*, VIII, p. 252.

¹²³ *J.H.S.*, XLVI, 1926, p. 181.

¹²⁴ Euripides, *Helen*, 1556; Polybios, I, 22, 9; II, 5, 5.

¹²⁵ Blümner, *Technologie*, IV, p. 437.

¹²⁶ *Insc. Délos*, 1416 A, col. I, line 77.

¹²⁷ *Insc. Délos*, 1417 A, col. I, line 73.

¹²⁸ *I.G.*, I², 374, lines 190 and 281 (= *Erechtheum*, pp. 390 and 394; XVI, col. 1, lines 30-33 and XVII, col. II, lines 33-34).

¹²⁹ *I.G.*, II², 1672, lines 151 ff.

¹³⁰ *I.G.*, XI, 2, 165, lines 4 and 32; 161 A, line 96.

¹³¹ *I.G.*, XI, 2, 165, line 5.

¹³² *I.G.*, XI, 2, 144 A, line 67. Cf. also 199 A, line 63 (40 drachmas), where, however, the entry is incomplete.

¹³³ See Buck, *Dictionary*, p. 501. Modern Greek *σκαλίδα*, *σκαλιστήρι* is a small weeding hoe.

¹³⁴ See Buck, *Dictionary*, p. 501.

¹³⁵ Cf. s.v. *Sarcolum*, p. 1076.

thus, X, pp. 343-344. In Aristophanes, *Nubes*, 1486-1500, the *sminye* was to be used for chopping up the roof of the *phrontisterion*.¹³⁶

We cannot be sure of the number of our word; if the form is correctly restored in Stele III, 12, as singular, the price of the *sminye* was three drachmas one obol. The only other price from antiquity known to me is given in the Edict of Diocletian, where the maximum figure is 12 denarii (Col. XV, 44: reading of the Geronthrean Stone).

23. *στελέα* (VI, 29). Haft, handle. It is now suggested that line 29 of Stele VI, which was left unrestored in Part I, be completed to read as follows: [*στελε*]αὶ δύο δύο *τόρον*. In the Eleusinian building records for the year 327/6 B.C., *steleioi* were purchased for six new *toroi*, 'drills.'¹³⁷ In Hesychius a *toros* is defined, in part, as the instrument into which the *steleos* was inserted.¹³⁸ In both cases the gender is masculine, but the feminine form occurs in Homer, *Od.* XXI, 422; Aeneas Tacitus, 18, 10, and Hesychius, *s.v.* *στειλέαν*.¹³⁹

The price of the *stelea* for *toroi* in 327/6 B.C. is given as 3 drachmas 3 obols each.

24. *στρωτήρ* (II, 121). Beam, rafter. From Harpokration and Suidas have come definitions of the *stroter* as the rafter or crossbeam laid upon the *dokos* or bearing-beam. In an architectural context the word, translated 'Sparren,' is discussed by F. Noack, *Eleusis*, p. 209, by L. D. Caskey, *A.J.A.*, XIV, 1910, pp. 303-306, and by F. Ebert, *Fachausdrücke*, pp. 38-40, 47.

Two prices for *stroteres* are contained in the Attic building inscription, *I.G.*, II², 1672, dated in the year 329/8 B.C. In line 63, the price is given as 1 drachma 4 obols; in line 85, as 2 drachmas 3 obols. In the former case 93 *stroteres* were purchased; in the latter, some figure of 15 or more. The *dokos*, or bearing-beam, cost 17 drachmas (line 66) and the smaller *himas*, plank laid upon the *stroter*, 1 drachma (line 64). These prices give some idea of the relative size of these roof timbers.

25. *τόρος* (II, 126).¹⁴⁰ Drill, borer.¹⁴¹ Eustathius defines a *toros* as a well-digging instrument or a tool for stone-cutting.¹⁴² Earlier Hesychius had defined it simply as a stone-cutting instrument.¹⁴³ Various types of chisels are illustrated by E.

¹³⁶ Cf. *Pax*, 546; *Aves*, 602.

¹³⁷ *I.G.*, II², 1673, lines 55-56.

¹³⁸ *S.vv.* *τόρος* and *τόρον*.

¹³⁹ See *Thesaurus Graecae Linguae*, *s.v.* *στειλεία*.

¹⁴⁰ Cf. VI, 29, where the restoration [*στελε*]αὶ δύο δύο *τόρων*, 'two handles of two drills,' is now proposed.

¹⁴¹ For the etymology, see Boisacq, *Dictionnaire*⁴, *s.vv.* *τείρω* and *τορός*, 'piercing.'

¹⁴² *Ad Od.*, V, 249 (p. 1533, 10-11).

¹⁴³ *S. v.* *τόρον*. Pollux (VII, 192, and X, 149) and Photius limited their definition to 'an instrument for digging wells,' as does Blümner, *Technologie*, II, p. 214, note 2.

Saglio, Daremberg-Saglio, *Dictionnaire, s.v. Caelum*.¹⁴⁴ Saglio equates the Latin *caelum*, 'chisel,' with *τόρος*. In an Eleusinian building inscription and in a section relating to the quarrying of stone, mention is made of toroi which were supplied with handles.¹⁴⁵ The word is not of common occurrence, but it seems not unlikely in view of the definitions of Hesychius and Eustathius and the context of the word in the building inscription that the instrument is the 'piercing' or pointed drill described in books relating to the technique of sculpture as the 'running drill.'¹⁴⁶

In the Eleusinian building accounts for the year 327/6 B.C., one lengthy item refers to the making of six new toroi.¹⁴⁷ The weight of the new instrument is given as 38 staters. The price of new iron was 4 obols per stater which makes the total 152 obols, or 25 drachmas 2 obols. The price of the metal per instrument, when made of *kainos sideros*, was 25 $\frac{1}{3}$ obols, or slightly more than 4 drachmas 1 obol. In addition, the payment to the craftsman for making the tools was 6 drachmas. The cost of each toros, then, was approximately 5 drachmas 1 obol, which was two and a half times the price of a *dikella*, as recorded in the same inscription.

26. *τροχιλεία* (V, 4). Pulley, block-and-tackle equipment.¹⁴⁸ The word usually seems to refer to the pulley of a hoisting machine;¹⁴⁹ sometimes it is taken to mean the entire block-and-tackle equipment.¹⁵⁰ In Athenaeus, V, 208 e, reference is made to the use of the *trochileia* for lifting stones and missiles. In Aristophanes, *Lys.*, 722, a woman had tried to let herself down from the Acropolis by the rope of the pulley. The building accounts of the Erechtheion for the year 408/7 B.C. recorded a payment to laborers working by the day on the trochileia.¹⁵¹ In *I.G.*, I², 313, line 112, and 314, line 123, there is mention of large and small trochileiai in the accounts of the epistatai of Eleusis in 408/7 B.C.¹⁵² Numerous epigraphical references from Delos, Epidaurus, Eleusis, and Athens are collected in van Herwerden, *Lexicon*², s.v. Blümner, *Technologie*, III, pp. 112 ff., discusses this pulley instrument in detail.

The cost of *τὰ τροχιλεία* is given in *I.G.*, IV², 1, 102, lines 49-50, as 260 drachmas. The word is in the plural, but Hiller (*ad. loc.*) equates the form with Attic *ἡ τροχιλεία*.

¹⁴⁴ For references to chisels found in more recent excavations, see Robinson, *Olynthus*, X, pp. 344 ff.

¹⁴⁵ *I.G.*, II², 1673, line 55.

¹⁴⁶ See Casson, *op. cit.*, pp. 202 ff.; and Richter, *op. cit.*, pp. 144-145.

¹⁴⁷ *I.G.*, II², 1673, lines 53-55.

¹⁴⁸ Definitions from Liddell-Scott-Jones.

¹⁴⁹ See Aristotle, *Mech.*, 853 a, 32; Polybios, I, 22, 5; and VIII, 4, 5. So Lucretius, IV, 905; and Vitruvius, X, 2, 1. The Latin word is *trochlea*. For well-side scenes on vases, in one of which at least a rope is strung on a pulley, see the references in Amyx, *A.J.A.*, XLIX, 1945, pp. 514-515.

¹⁵⁰ Cf. *I.G.*, XI, 2, 161 A, line 69. This *μηχανή* is identified by Kirchner (*ad I.G.*, II², 1672, line 156) as a trochileia.

¹⁵¹ *I.G.*, I², 374 K, lines 142-143 (= L. D. Caskey, *Erechtheum*, p. 386).

¹⁵² See also *I.G.*, II², 1672, lines 156, 205, and 309.

This Epidaurian inscription is dated in the early part of the fourth century and records the accounts of the building of the temple of Asklepios. In the accounts of the epistatai of Eleusis of the year 329/8 B.C., there is a record in lines 205-206 of a sum due to a certain Sosidemos for the iron-work of the trochileia. The weight of the iron is given as 83 talents 23 staters, and the sum of money is 1569 drachmas.¹⁵³

27. *τρύπανον* (II, 131). Auger.¹⁵⁴ The word is derived from **ter-* meaning 'bore.' Buck and others define it as 'auger,' a more or less generic word for a boring instrument. Casson believes that the word should be restricted to the 'bow-drill,' which is certainly one meaning.¹⁵⁵ Clear reference to such a drill occurs as early as Homer, *Od.*, IX, 385. The spinning motion of the *trypanon* is mentioned in Euripides, *Cyclops*, 461. The instrument was used in gem-cutting as well as by the sculptor and the carpenter.¹⁵⁶ A clear illustration of a bow-drill, reproduced from a hydria of the fifth century in the Boston Museum, appears in Cloché, *Classes*, etc., plate 26. Trypana are described in detail by Blümner, *Technologie*, II, pp. 222-226; and by de Villefosse in Daremberg-Saglio, *Dictionnaire*, s.v. *Terebra*.

28. *ύών* (V, 39). Pigpen. This word has occurred before only in a small and fragmentary papyrus: C. C. Edgar, *Zenon Papyri*, III, Cairo, 1928, 59468, line 2. The word was apparently first defined in Liddell-Scott-Jones, *Greek-English Lexicon*, revised edition, 1940. See Buck and Peterson, *Reverse Index*, p. 259, for this and similar formations in -on.

29. *φρύγανον* (IX, 9-10). Brushwood. *Phryganon*, derived from *φρύγω*, 'roast or parch,'¹⁵⁷ is a term applied to small dead wood or brushwood. Theophrastos, *H.P.*, I, 3, 1 made four genera of plants: tree (*dendra*), shrub (*thamnos*), herb (*ποα*), and undershrub (*phryganon*). In *Syll.*⁸, 1027, lines 14-15, the word is distinguished from *ξύλα*; in Plutarch, *Fab.*, 6, 4, it is made synonymous with *lygos*, 'twig' or 'withe.'

I have discovered no prices for phryganon in sacred inscriptions where *xyla* and *rhymos* seem to be the usual words for firewood for sacrifices.

30. *χάραξ* (II, 254, 259; V, 25). Vine-prop, pointed stake. The word, derived

¹⁵³ *I.G.*, II², 1672, lines 205-206. Through the kindness of the Ephor, M. Mitsos, I was able to examine this stone in the Epigraphical Museum, which at the time of this writing is closed for repairs. Kirchner had read the figures for the weight of the iron in talents as 5033. The first character which he read as the numeral for 5000 is the sign for fifty talents (i.e. 10 x 5 talents). Kirchner's H is actually a T. This corrected reading accords with the earlier text of Koehler in *I.G.*, II, 834b, II, line 70.

¹⁵⁴ See Buck, *Dictionary*, p. 594.

¹⁵⁵ *Op. cit.*, p. 208. Cf. Richter, *op. cit.*, p. 144.

¹⁵⁶ See Babelon in Daremberg-Saglio, *Dictionnaire*, s.v. *Gemmae*, p. 1469a.

¹⁵⁷ See Boisacq, *Dictionnaire*⁴, p. 1040.

from *χαράσσω*, 'sharpen,' 'make pointed,'¹⁵⁸ can be used for any pointed stake. In Stele V, the modifying phrase *ὑπὸ ταῖς ἀμπέλοις* makes clear that our reference is to vine-props. In Aristophanes, *Ach.*, 986, the reference, too, is clearly to vine-props. The use of such props, usually of oak or olive wood, for grapevines is discussed, with references to ancient literature, by Jardé in Daremberg-Saglio, *Dictionnaire*, s.v. *Vinum*, p. 918 a.

Most vines needed props, as may be concluded from numerous references: Homer, *Il.*, XVIII, 563; Hesiod, *Scutum*, 298; Aristophanes, *Ach.*, 986; Theokritos 3, 70; Varro, I, 8. Some species remained on the ground, but the grapes were liable to be eaten by mice and foxes. Some grew on trees, but this was not approved of by the best authorities.¹⁵⁹ The need for vine-props, then, in a country which specialized in vines, was extensive.

Although it is well known that large timber, particularly for naval purposes, had to be imported into Athens, a passage in Demosthenes, XXI, *Against Meidias*, 167, indicates that in the fourth century even small *charakes* were brought in by sea. At the end of the Archidamian War we learn from the *Pax* of Aristophanes that the price of a hundred vine-poles was not more than one drachma.¹⁶⁰ Stele II, line 254, contains the entry 10200 vine-poles. The sale price is given as 59 drachmas. For each hundred stakes the price was roughly 3½ obols. These stakes were hardly new, for they are described as being in a *chorion* at Phaleron. Similarly, in Stele V, lines 24-25, the stakes were described as under the vines in a field at Athmonon (modern Amaroussi). In the case of the entry in II, 254, the sale price is given to the left of the entry for *charakes*, but it must include the price of the stone *lenos* in the line below, the two entries being sold together.

In the Edict of Diocletian, Col. XIV, line 7 (A.D. 301), the maximum price for *charakes* is given as 10 denarii per bundle of 100.

IX. WEAPONS

The Greek names for the various weapons used in their armies are collected by P. Monceaux in Daremberg-Saglio, *Dictionnaire*, s.v. *Exercitus*. Only the spear and the short spear occur in our lists. The present author is unaware of any definitive treatment of individual Greek weapons corresponding to the study of the Roman *pilum* by Schulten in the *R.E.* Petrie's 1917 study of weapons (*Tools and Weapons*) is based on Egyptian material. Interest in Greek weapons seems to have been chiefly in those of the Homeric period, for which Miss Lorimer's brilliant article in *B.S.A.*,

¹⁵⁸ See Boisacq, *Dictionnaire*⁴, s.v.

¹⁵⁹ See Michell, *Ec. of Anc. Greece*, pp. 79-80.

¹⁶⁰ Line 1263. Columella (XI, 2, 12) states that one man could cut 110 vine-props in a day.

XLII, 1947, pp. 76-138, is basic,¹ although weapons have been ardently collected and reported from numerous excavations. Lammert has sketched the history of the bow in *R.E.*, *s.v.* *Pfeil*; H. Weber's chapter "Angriffswaffen" in *Olympische Forschungen*, I, Berlin, 1944, pp. 146-165, seems to be the most detailed study of the archaeological evidence. There is a useful illustrated study of arms and armour in the British Museum, *Guide to the Exhibition Illustrating Greek and Roman Life*², London, 1920, pp. 74-109. Robinson has published a chapter on arrowheads, spearheads, slingbullets, and shields in *Olynthus*, X, pp. 378-446.

I know of no study on the cost of ancient weapons. Stele II contains the price of the short hurling spear and a spear without butt-spike as 2 drachmas and 1 drachma 4 obols, respectively.

In a scene near the close of the *Pax* of Aristophanes, various traders come upon the scene and interview Trygaios. The prices for their wares include 1000 drachmas for a breastplate (*thorax*), 60 for a trumpet (*salpinx*) and 50 for a helmet (*kranos*).² These are regarded as high, if not fictitious, prices.³ In *I.G.*, II², 1126, lines 29-30, a law of the Delphic Amphictyonic League dated in 380/79 B.C., the shield is priced at 200 Aeginetan staters and the crest (*lophos*) at 15 staters. This amounts to 600 drachmas for the former, 45 for the latter. But these were apparently adornments for a colossal statue and hardly typical prices. The price of the *δόρυ*, which would complete the panoplia and provide a basis for comparison, is unfortunately lost.

One other inscription is known to me which contains prices for some weapons. This is from Koresia on the island of Keos and is dated at the beginning of the third century B.C. The weapons mentioned were given as prizes of victory, so were presumably of good quality. The following prices are given:

VALUE OF WEAPONS IN *I.G.*, XII, 5, 647⁴

<i>Weapon</i>	<i>Price</i>	<i>Line No.</i>
Bow (<i>toxon</i>)	7 dr.	28
Bow and quiver (<i>pharetra</i>)	15 dr.	28
Spearhead (<i>lonche</i>) ⁵	3½ ob.	30
Staff pole (<i>kontos</i>)	2 dr.	31
Shield	20 dr.	31

Our evidence is scattered, but we can safely conclude that weapons were not cheap.

¹ D. H. F. Gray's recent article "Metal-Working in Homer" (*J.H.S.*, LXXIV, 1954, pp. 1-15) includes references to early weapons discovered in excavations.

² Lines 1224, 1240, 1251.

³ A. Böckh, *Staatshaushaltung der Athener*³, I, p. 138; Ehrenberg, *People of Aristophanes*², p. 224.

⁴ *Syll.*³, 958.

⁵ Or, possibly, spear.

δοράτιον (II, 226). Short spear. Hesychius defines *doration* as the short lance or javelin (μικρὰ λόγχη or ἀκόντιον).⁶ It was cast by hand and used for striking from afar. In the fighting at Pylos the doration is mentioned by Thucydides as a weapon of the Athenian light-armed troops which along with stones inflicted injury on the Spartans.⁷ It is described by De Ridder in Daremberg-Saglio, *Dictionnaire*, s.v. *Jaculum*, p. 594 b.

δόρυ ἄνευ στόρακος (II, 225). Spear without the butt-spike. δόρυ, a common word in Homer, was originally the 'tree-trunk' or 'beam,' whence it came to mean 'spear-shaft' and eventually, sometimes, 'spear.' It is connected with Greek δρῦς 'tree, oak' and Avestan *daru*—'tree-trunk.'⁸ Cuq in Daremberg-Saglio, *Dictionnaire*, s.v. *Hasta*, p. 33 b, states δόρυ "signifie proprement le bois (Homer, *Il.* XVI, 814); aussi les poètes l'emploient-ils pour désigner d'autres bois que celui de la lance, mais dans les auteurs de prose il désigne toujours la lance." In our entry the qualifying phrase 'without the butt-spike' makes clear that δόρυ has its customary prose meaning.

The word *styrax* is known from Xenophon, *H.G.*, VI, 2, 19, and Plato, *Laches*, 184 a.⁹ In the former passage the Spartan commander at Korkyra is described as using his baton to strike one of his captains, his styrax to strike another. If the styrax were the spear-point, the commander would have killed instead of flogged the man. It must, then, be the butt end of the lance. In the Plato passage, the mariner is said to have let the spear slip through his hand until he retained only the end of the styrax. The word is derived from σταυρός and is the Attic form for the more common *σανρωτήρ*.¹⁰ Both words, then, refer to the caps fastened on to the end of the shaft at the opposite end from the spear-head.¹¹ The spear could then be stuck upright in the ground.¹² Many of these butt-spikes have survived. Several are described by Robinson (*Olynthus*, X, pp. 416-418, plates 127-128) who gives references in his notes to those from other excavations than Olynthos.

X. MISCELLANEOUS

Included under the title of 'Miscellaneous' are twelve items which do not fall easily under any of the nine preceding headings. They are listed in alphabetical order by the Greek names.

1. ἀργύριον ἀργόν (VII, 93). Unwrought silver. The item in Stele VII, line 93

⁶ s.v. ἀκόντιον.

⁷ IV, 34, 3.

⁸ See, in particular, Buck, *Dictionary*, p. 1390.

⁹ For the most complete documentation of this word, see *Thesaurus Graecae Linguae*.

¹⁰ See Boisacq, *Dictionnaire*, pp. 902 and 922.

¹¹ See Harpokration, s.v. *σανρωτήρ*.

¹² See, for example, Homer, *Il.*, III, 135.

was earlier restored in the *editio princeps* as [ἀργύ]ριον ἀργὸν κ[— —],¹ and this reading was retained in our Part I.² The second thought of the present writer, however, is that he would hesitate to accept the restoration.

Meritt noted as a parallel for his restoration that in Pausanias III, 12, 3, ἄργυρος was modified by *argos*. Similarly, one might have cited passages in which *argos* is used with the same meaning and is applied to lead, bronze, and iron.³ But our entry occurs following a series of *pithaknai* and preceding a rather lengthy list of roof tiles. A reference to uncoined silver seems out of place.

The adjective *argos* can be applied to certain types of manufactured objects which are left 'unfinished' or to certain objects or tools which are 'idle.' In architecture, the word means 'blank.' For example, the uncarved moulding or the block without anathyrosis is so termed in the Erechtheion building inscriptions.⁴ Liddell-Scott-Jones lists examples of the 'undressed' hide, wheat 'unprepared for eating,' the 'unpolished' stone, land 'lying fallow,' and χρήματα 'yielding no return.' In Josephus the stone which is 'unwrought' is *argos*.⁵ Since our inscription is not stoichedon (although 3½-4 letters seem likely for the lacuna before the rho), and nouns in -ριον are numerous (see Buck and Petersen, *Reverse Index*, pp. 94-108), the author is not prepared to offer a substitute restoration. In keeping with the sequence of jars, one might suggest ἀμφόριον, λεκάριον,⁶ or possibly λουτήριον. On the whole, however, the item seems too elusive.

2. βαθρόθυμα (V, 33). Base of a *thymiaterion* or censer. All the letters of this word, which is new in Greek lexicography, are preserved with the exception of the first. In Part I no effort was made to identify the object which it names. It may now be suggested that the word is compounded from βάθρον, 'base, pedestal,' and θύμος, 'thyme' or θυμός,⁷ and refers to the base of a thymiaterion. For the formation of the word, comparison may be made, for example, with ἐπίθυμον. K. Wigand in his apparently exhaustive study of the thymiaterion in *Bonner Jahrbücher*, CXXII, 1912, pp. 1-97, gives illustrations of terracotta bases from Greek sources (pp. 41-42). Since our item follows a terracotta object and is in turn followed by a vase, it is reasonable to infer that it too was of terracotta.

3. δέσμη (II, 151). Bundle, package. For the etymology cf. Boisacq, *Dictionnaire*⁴, s.v. δέω I. Athenaeus quotes a fragment from Semos of Delos to the

¹ B. D. Meritt, *Hesperia*, VII, 1938, p. 81.

² *Hesperia*, XXII, 1953, p. 282.

³ See the references in *Thesaurus Graecae Linguae*.

⁴ See G. P. Stevens, *Erechtheum*, pp. 315 and 316 with references.

⁵ *Ap.*, I, 198.

⁶ Pollux (X, 87) specifically associates *lekos* with our Stelai, and the item *lekarion* (X, 86) is mentioned in the sentence which follows a reference to confiscated lists.

⁷ For the derivation of θυμιάω, etc., from θυμός, see Boisacq, *Dictionnaire*⁴, s.vv. θυμός and θύμος.

effect that several handfuls of barley (-sheaves) were bound together into a single *desme*.⁸ Similarly, Athenaeus elsewhere refers to a *desme* of split wood;⁹ Alexis refers to 'bundles' of thyme;¹⁰ and Dionysios of Halikarnassos (III, 61) to a 'bundle' of rods. Hesychius defines ἀγκαλίδες, 'armfuls,' as *desmai* of firewood.¹¹ The word was widely used in Egypt for 'bundles' of hay and straw; see the papyrological references in A. C. Johnson, "Roman Egypt," *Economic Survey*, II, pp. 470-471.

In II, 151, the word *desme* is followed by a sigma. The remaining letters of the word are lost, and the item was left uncompleted in Part I. Since there are references to *desmai* of coriander, of wheat, of barley,¹² one likely restoration would be the word σ[ησάμων]. The entry would presumably refer to sesame-sheaves. Another possibility might be the word σ[άκκων]. [Demosthenes] XXXV, *Against Lakritos*, 34, contains a reference to *desmai* of skins, and by analogy *desme* of *sakkoi* would refer to a bundle of cloth bags or sacks.

4. ἐκχάλκωμα (VI, 86). Bronze objects. The word occurs only in our inscription. The first five letters are preserved; the remainder has been completed according to the suggestion of Tod in *Hermathena*, LIX, 1942, p. 82. The simplex is used for any bronze vessel or instrument, including bronze tablets for treaties¹³ and a metal breastplate.¹⁴ The diminutive of the simplex, *chalkomation*, is used in *Insc. Délos*, 1417, A, col. I, line 104, for ten objects which were contained in a small box. The reference in our inscription may well be to similar small objects, for the price is given as 52 drachmas, approximately one fourth of the value of the bronze *obelos* of I, 95.

5. ἐπικαρπία (I, 20, 22, 29; II, 81, 97, 178; VIII, 5; X, 11, 31[?]). Crop. A precise definition of this word in our context is difficult. It first occurs in the Gortynian Laws (ca. 450 B.C.)¹⁵ in connection with the rights of heiresses and bears the general meaning of 'revenue' or 'income' of all the property. This seems to be the meaning also in its earliest literary use, in Andokides I, 92. However, Holleaux, in publishing an inscription from Thespiai, noted that the meaning of *epikarpia* was there "récolte . . . sur pied dans le moment où la vente a lieu."¹⁶ He gave references to the Attic Stelai for a similar meaning. The definition of 'crops not yet reaped' has subsequently been accepted for *epikarpia* in our inscriptions, for example, by Kirchner,¹⁷

⁸ XIV, 618 d (= F.H.G., IV, 495).

⁹ XV, 700 b.

¹⁰ Frag. 117: Kock, C.A.F., II, p. 339.

¹¹ Cf. Pollux, II, 139.

¹² See *Thesaurus Graecae Linguae*, s.v.

¹³ Polybios, III, 26, 1.

¹⁴ Polybios, VI, 23, 14.

¹⁵ *Inscriptiones Creticae*, IV, Rome, 1950, 70, col. VII, line 33.

¹⁶ R.E.G., X, 1897, p. 36. Cf. also Ziebarth, *Wochenschr. klass. Phil.*, XIV, 1897, 1026.

¹⁷ *Ad Syll.*³, 96, note.

Daux,¹⁸ Tod,¹⁹ and the present writer.²⁰ Simultaneously, however, Liddell-Scott-Jones has defined the word here simply as 'produce, crop.' The crux passage would seem to be our Stele X, line 11, which reads: ἐπικαρπία τῆς γῆς ἐν Ὀφρυνείῳ ἐκεκό[μιστο]. Clearly, the epikarpia here has been harvested. Pollux in Book I, 237, in a paragraph which enumerates the parts of a tree, gives a list of words meaning 'produce' or 'crop.' *Epikarpia* occurs between ἐκφόριον, 'that which the earth produces,' and καρπὸς ἀκμάζων, 'a ripe crop.' The word would seem, then, to have some general meaning of the crop in fruit,²¹ whether or not it had been picked.

6. κηρωτή (I, 163). Salve, cosmetic. All the letters of this word except the last are restored. Such extensive restoration may seem very bold, and none was attempted in the previous edition, which was the *editio princeps*. Nevertheless, the present editor has proposed this text in Part I on the evidence of a sentence in Pollux, X, 150, which reads: ἐν δὲ τοῖς Δημοπρατοῖς καὶ ράκια καὶ κηρωτὴ γέγραπται. The sentence occurs in a section which has the heading ἱατροῦ σκεύη. Since *rakia* is inscribed on the same line as our word, and the restoration of *kerote* meets the stoichedon requirements, it seems reasonable to associate the two in our stele.

There are numerous references in medical writers, particularly Dioskorides, to various kerotai made from myrtle (3, 45), iris (3, 84), Dropwort (1, 148), roses, etc. Starkie (*ad Aristophanes, Ach.*, 1176) collects similar passages in Hippokrates.²² Hug's article in Daremberg-Saglio, *Dictionnaire*, s.v. *unguentum*, contains the prices of various ointments. See also the prices of various ingredients in Col. XXXII of the Edict of Diocletian.

7. λίτρον (II, 135). Carbonate of soda. For the Ionic-Attic form λίτρον, see Schwyzer, *Gr. Gram.*, I, pp. 259 and 532.²³ For the derivation, see Boisacq, *Dictionnaire*⁴, s.v. *λίτρον*. The earliest occurrence of the word is in Herodotos.²⁴

Nitre, often mixed with castor oil, was used as a soap by fullers and washers.²⁵ The word is treated at length by Schramm (in *R.E.*, s.v. *nitrum*), who discusses the source and use of the substance which, he says, is variously translated as soda, salt-

¹⁸ *B.C.H.*, L, 1926, p. 217.

¹⁹ *Gr. Hist. Inscr.*, I², p. 199.

²⁰ *Hesperia*, XXII, 1953, p. 233.

²¹ Thus the later adjective ἐπικαρπος means 'fruit-bearing.'

²² In Aristophanes, frag. 320, line 1, quoted in Pollux, VII, 95, *kerote* means 'cosmetic,' a meaning which Dindorf in the *Thesaurus Graecae Linguae* attributes also to the passage in Pollux, X, 150. For the use of salves in the toilette, see Hug, in Daremberg-Saglio, *Dictionnaire*, s.v. *unguentum*, 1856.

²³ Moeris, Photius, and Phrynichos all testify to the form λίτρον in Attic writers of an early date.

²⁴ So Buck and Petersen, *Reverse Index*, p. 338.

²⁵ Pollux, X, 135. Cf. Blümner, *Technologie*, I², p. 175.

peter, and potash.²⁶ Schramm's discussion, however, is almost entirely restricted to the evidence from Pliny's *Natural History*. One detailed chemical study of nitron is not mentioned by Schramm, that of K. C. Bailey (*The Elder Pliny's Chapters on Chemical Subjects*, I, London, 1929, pp. 169-171) who concludes that the nitron or litron of the ancients was not always the same, but that in most cases it was a carbonate or bicarbonate of sodium or potassium.

The use of litron (in composition) in Athens as a soap can safely be inferred from Aristophanes, *Ranac*, 711, and Plato, *Tim.*, 60 d.²⁷ Athenaeus quotes fragments which indicate its use as an antidote to poisoning (II, 61 d); in cooking (II, 68 a: Antiphanes, Kock, *C.A.F.*, II, p. 69); and for cleansing (XV, 665 b: Plato, Kock, *C.A.F.*, I, p. 620). Anaxippos (Kock, *C.A.F.*, III, p. 300) uses *nitron*, 'the soda-shop,' as the place in the market where groceries were sold; cf. Gulick *ad* Athenaeus, IV, 169 c. Herodotos (II, 86, 87) describes its use in embalming. The careless husband in Theokritos (XV, 16) forgot to bring home nitron, no doubt for use as a soap.

For the price of a form of sodium carbonate, see T. Frank, *Economic Survey*, V, p. 417 (Col. XXXII, line 34 of the Edict of Diocletian: 250 denarii a pound).

8. ὀβελίσκος (I, 93-94; II, 132). Small skewer, spit. Since our word occurs in I, 93-94 in the company of kitchen utensils, it seems reasonable to assume that the specific meaning is here 'skewer' or 'spit.' The word in this meaning is studied by Reinach in Daremberg-Saglio, *Dictionnaire*, s.v. *Veru*. His fig. 7406 shows illustrations of spits for roasting. At Delos, *obeliskoi* were frequently dedicated, and Deonna has collected numerous references in *Délos*, XVIII, p. 227.²⁸ The inventories of the Treasurers of Athena mention 42 votive *obeliskoi*.²⁹ The most detailed study of the meaning of the word is in W. Petersen, "Greek Diminutive Suffix -ισκο- -ισκη-," *Transactions of the Connecticut Academy of Arts and Sciences*, XVIII, 1913, pp. 165 and 181. Petersen states that when *obeliskos* means 'spit' there is no clear reference to small size, and suggests that its identity with *obelos* is due to prehistoric syncretism. He notes one inscription in which the word is qualified by the adjective *mikros*³⁰ and lists five other meanings for the word, to which now may be added 'drainpipe' and 'bar.'³¹ On the other hand, the juxtaposition of *obelos* and *obeliskos*

²⁶ For the Asia Minor sources of soda, see T. R. S. Broughton in *Economic Survey*, IV, p. 624. The best, however, came from Calatra on the Theramic Gulf, and a coarse variety was plentifully produced in Egypt (Pliny, *H.N.*, XXXI, 106; Strabo, XVII, 803).

²⁷ Blümner, *R.E.*, s.v. *Seife*. Plutarch, *Demetr.*, 27, contains the amusing story of Demetrios spending 250 drachmas, which the Athenians had levied on themselves, for soap (*smegma*) for Lamia and her fellow courtesans.

²⁸ See also *I.G.*, II², 1638, line 67, and 1640, line 30 (*tabulae amphictyonum Deliacorum*).

²⁹ *I.G.*, II², 1425, line 407.

³⁰ This inscription has more recently been published as *I.G.*, XI, 2, 161, B (line 128).

³¹ For references, see Liddell-Scott-Jones and cf. Tod, *Num. Chron.*, 6th Ser., VII, 1947, p. 1. For the meaning 'obelisk,' see, in particular, J. Friedrich, *Diminutivbildung*, p. 20.

in consecutive lines of Stele I raises the question of what distinction is intended. The present writer finds it hard to believe that the two words are identical and would guess that the difference is one of size.

Price. In I, 93, eight obeliskoi were sold for 17 drachmas, or slightly more than 2 drachmas apiece. In I, 94, six obeliskoi brought 14 drachmas 2 obols. The average price of fourteen was slightly less than 2 drachmas 1½ obols.

Most obeliskoi were doubtless of iron. In two Delian accounts, where the meaning of the word is 'bars' or 'rails' of a balcony, Glotz has stated: "Des barreaux qui valaient 7 ob. en 298 valent le même prix en 250 pour une quantité plus que double."³² Glotz lists other prices from Delos. It should be noted, however, that some of the Delian obeliskoi were made of oak-wood.³³

Prices of iron objects in general are given in A. C. Johnson, "Roman Egypt," *Economic Survey*, II, p. 471.³⁴ Nails, for example, varied in price between 2 and 8 drachmas per mina of weight.

9. ὀβελός (I, 95). Skewer, spit. The meaning and use of the word *obelos* have been made the subject of a special and thorough study by M. N. Tod (*Num. Chron.*, 6th Ser., VII, 1947, pp. 1-27). Tod notes that *obelos* was the spelling for the word in the sense of 'spit' and that after 485 B.C. all Attic inscriptions use *obolos* for the coin or sum of money.

Price. Whereas most skewers or spits were doubtless of iron, our object in I, 95 is specified as being of copper:³⁵ the single skewer brought the price of 200 drachmas. Unfortunately, the weight is not given. In *Insc. Délos*, 313, frag. i, line 15, twelve copper obeliskoi averaged one mina apiece; so there is no reason to associate the *obelos* or *obeliskos* with the standard *obol* of the Aeginetic and Attic-Euboic weight standards.

10. παραστόμιος (II, 198). The word is unknown elsewhere in Greek. It occurs only here in the form παραστομία. It is preceded on the same line by a word of five letters, of which only the final one, a sigma, is preserved. Presumably we have a feminine adjective modifying a noun in the singular number.

³² *Journal des savants*, XI, 1913, p. 27. The references are to *I.G.*, XI, 2, 148, line 70, and 287, A, line 101.

³³ *I.G.*, XI, 2, 199, A line 62 (6 drachmas apiece); 203, A, line 50 (also 6 drachmas apiece).

³⁴ No prices of iron are given in Heichelheim, *Wirtschaftliche Schwankungen*, or in Larsen's "Roman Greece," *Economic Survey*, IV. For a succinct account of the economic importance of iron, see Rostovtzeff, *Soc. and Ec. Hist. of Hell. World*, II, p. 1217.

³⁵ The word χαλκός covered both 'copper' and its alloy with tin, 'bronze.' Buck (*Dictionary*, p. 611) notes that the actual reference in the majority of cases would be to bronze, since this was so much more extensively employed than pure copper. Cf. Blümner, *Technologie*, IV, pp. 38-66. An analysis of numerous specimens is summarized in K. C. Bailey, *The Elder Pliny's Chapters on Chemical Subjects*, II, pp. 159-161.

The simplex *στόμιον* in the sense of 'that which belongs to the mouth,' 'bit,' has been studied by W. Petersen (*Greek Diminutives in -ιον*, p. 53), who gives ancient references for this meaning.³⁶ Lafaye, too, has discussed the word, with illustrations, in his article on *Frenum* in Daremberg-Saglio, *Dictionnaire*, 1337 a. But the most detailed study of the bit seems to be that of E. Pernice, "Griechisches Pferdegeschier" in *Berliner Winckelmanns Programme*, no. 56, Berlin, 1896. Pernice publishes two bronze bits belonging to the fourth century B.C. which were found with muzzle and part of headstall in a grave in Boeotia.

Prepositions other than *παρά* are compounded with *stomion* to designate parts of the bridle. We know from Pollux that *upostomia* is an iron part of the bridle;³⁷ the *peristomion* may be the part which goes over the nose and attaches to the ends of the bit.³⁸ But not all of the words for the parts of the bridle are known. Marchant has observed in a note on Chapter X of Xenophon's masterly treatise on *Horsemanship*, a chapter in which the bit is described in some detail, that we do not know the Greek terms for "the pendants to which the reins were attached" or "the curved or S-shaped branches with eyes to which the bridle was fastened."³⁹ Either of these pieces might well be described as *parastomia*. Since our adjective is modifying a feminine noun ending in sigma,⁴⁰ some such word as *labis*, which can mean a clasp or buckle and has the sense of something that one can take hold of, may be suggested.⁴¹ This would admirably suit Marchant's second missing term, the piece to which the bridle is fastened. The fact that a modifier *parastomia* was needed shows that the word was one with a general meaning, not always associated with the bit. Moreover, the piece was very small and might reasonably be sold for the price given on our stone, 2 obols. The complete entry in Stele II, line 198, may now be tentatively corrected to [λαβί]ς παραστομία.

11. *ράκια* (I, 163). Bandages, rags. The word *rakos* can designate a rag of any kind, not only a ragged garment.⁴² Petersen has concluded, on the other hand, that

³⁶ Herodotos, I, 215; IV, 72; Aeschylus, *Prom.*, 1009; Sophocles, *El.*, 1462. For other meanings of *stomion*, see Petersen, *op. cit.*, pp. 50, 103, and 113.

³⁷ I, 184; II, 100; and X, 56.

³⁸ Cf. Hesychius s.v. *πισάκιον*.

³⁹ Xenophon, *Scriptora Minora*, Loeb Classical Library, pp. 350-351. Cf. Pernice, *op. cit.*, p. 23.

⁴⁰ Although most of the compounds in *-στόμιος* make adjectives of two terminations, Liddell-Scott-Jones lists *ἀστόμιος* as one of three terminations. But the evidence there cited is not conclusive. Buck and Petersen (*Reverse Index*, p. 43), however, have shown that no fixed rules are possible: "The fem. of *-ιος* is sometimes the same as the masc., sometimes it is *-ια*, Ion. *-ιη*. The familiar rule according to which compounds do not change, but simple words form a distinct feminine, has many exceptions."

⁴¹ Cf. *cheirolabis*, the part of a plow which one takes hold of (Pollux, I, 252).

⁴² In the accounts of Artemis Brauronia, *I.G.*, II², 1514 ff., *rakos* has a special meaning as determined in A. Mommsen's article on this word in *Philologus*, LVIII, 1899, pp. 343-347. Kirchner (*ad I.G.*, II², 1524, line 177) has summarized Mommsen's conclusions as follows: "*ράκος* hic et

rakion "is always a ragged or tattered garment in the Attic."⁴³ He finds the word a deteriorative rather than a diminutive in origin.⁴⁴ Nevertheless, Pollux (X, 149-150) has listed the word under the general heading of medical equipment and has specifically noted that *rakia* was joined with the word for 'salve' or 'cosmetic' in the records of the sale of confiscated property. The reference seems to be to our line. *Rakia*, then, seems here to refer to bandages made of rags.

12. *τηλία* (II, 143). A kind of board or tablet. The definition is that of Buck, *Dictionary*, p. 601. This item, of which eighteen were sold, occurs just after the entry for two jars (*kadoi*) and preceding a list of articles of furniture. The word is discussed at some length in Boisacq,⁴⁵ who lists two etymologies of unrelated meanings. The rare Attic *telia* means the 'hoop of a sieve.'⁴⁶ The more common meaning is related to Sanskrit *tala*-, 'plane surface,' and Latin *tellus*, 'board.' Boisacq's first definition is 'table de boulanger,' which accords with the definitions given by the Scholiast to Aristophanes, *Plutus*, 1037, by the Venetus Scholiast to *Vespae*, 147, and by Bekker, *Anecd.*, 275, 15. Architecturally, the word has sometimes been defined as 'trap-door.'⁴⁷ This meaning derives from the description of the house of Philoktemon in Aristophanes, *Vespae*, 139-148, where a *telia* was clapped over the opening of the flue in the kitchen when the old jurist attempted to escape. It is clear, however, that this *telia* was movable, for it required a log to keep it down. All that is meant by *telia* in this passage is 'board.' In Aischines, I, *Against Timarchos*, 53, the reference is to a gaming board for cock-fighting. As the description in the Scholiast to Aristophanes, *Vespae*, 147, states, the *telia* was a type of thick *σανίς*, or board, but just what type would have been accumulated to the number of eighteen is problematical.

deinceps non pannum significare sed particulam vestimenti muliebris menstruis imbutam probat Mom. Inde natam esse vim vocabuli in hoc recensu obviam, ut scilicet usurpetur pro donario a puellis virginitatem adeptis Dianae oblato."

⁴³ *Op. cit.*, p. 129.

⁴⁴ *Ibid.*, pp. 95-96. It may be noted that in *I.G.*, XI, 2, 147 B, line 13, where furnishings were characterized as 'ragged,' the adjective *ράκωδη* was used.

⁴⁵ *Dictionnaire*⁴, pp. 966-967.

⁴⁶ For objects illustrating this meaning, cf. Blümner, *Technologie*, I², p. 51; and Saglio in Daremberg-Saglio, *Dictionnaire*, s.v. *Cribrum*.

⁴⁷ See, for example, Robinson and Graham, *Olynthus*, VIII, p. 195; Robinson, *Olynthus*, XII, p. 471; and Liddell-Scott-Jones.

ADDENDA ET CORRIGENDA TO PART I

Listed below are all changes which have been made in the text of the Attic Stelai as published in Part I. Several of the corrections I owe to the kindness of a communication from Marcus N. Tod. For the most part, the *addenda* result from the restudy of the items in Parts II and III.

Line Nos.

Stele I

- 175 For *τάπισ* read *δάπισ*
 229 Enter the tax as [†]
 230 “ “ “ “ [III]
 231 “ “ “ “ [III]
 232 “ “ “ “ [III]
 232 For [λιτ]όν read [. ? .]ον

Stele II

- 13 Read [III] [ΔΔ]IIII
 21 For π[α]ναθηναϊκ(οί) read π[α]ναθηναϊκ(ό)
 32 For ὑπο[σταθμὸν] read ὑπό[σταθμον]
 35 For ὑποσταθμὸν read ὑπόσταθμον
 116 For [. . . ? . . .]ν λέκος read [. . . ? . . .]ν λέκος
 122/3 Read *κεράμο στε[γ]α{σ}—*
στῆρος ζεν· Η[. . .]!
 135 For *σαργάνα* read *σαργάνα[ι]*
 151 For σ[— — —] read σ[εσάμον]
 192 For κρ[ατέρες] read κρ[ατῆρες]
 198 For [. . . .]ς παραστόμια read [λαβι(?)]ς παραστομία
 201 For [χ]όναι read [χ]όναι and delete † in the price column
 222 For I read † (sales price)
 227 For — — .II read [I] [†]II
 245 Change to: [II]I [ΔΔ]ΔΔ† κλῖνα[ι]ΓII
 247, 253, Correct Φαλέροι to Φαλεροῖ
 and 256

Stele III

- 6 For κλι[νίδιον] read κλί[νε]
 13 For κά[δος] read κά[δοι — — —]
 14 For στ[άμνος] read στ[άμνοι — — —]

Stele V

- 14 For ἐπικ[λίντρο] read ἐπικ[λιντρον]
 15 For κλίναι read κλῖναι
 22 Amyx reads ἔτερα Δ| ἐμίσε{ι}α.
 24 For Ἀθμον[εῦσι] read Ἀθμον[οῖ]
 28 For Κεραμ[εῦσι] read Κεραμ[έον]
 32 For [τρ]ιπτέ<ρ>ε read [τρ]ιπτέ<ρ>ε
 33 Read [β]αθρόθυμα
 34 Read φιδάκνε<ς> στόμα
 36 Amyx prefers the removal of the mark of punctuation.

Stele VI

- 29 For [. . .^{ca. 6} . . .]αι read [στελε]αῖ
 35 Change to [τραπέ]ζιον
 38 Change to [σκήμ]ποδες
 68 Read the tax and sales price as [Η] [Η]
 69 Read the tax and sales price as: [Τ] [Ρ]ΔΔ
 70 At the end of the line add: τούτον]
 73 For— . . .Δ read [Τ] [Ρ]ΔΔ]Δ
 86 For ἐκχαλ[κώματα] read ἐκχαλ[κόματα]

Stele VII

- 46 For Ἀσχχίοχο read Ἀσχ[χ]ιόχο
 93 For [ἀργύ]ριον read [. . .]ριον
 98 Read [Κορι]νθιοργῆς Η — —
 106 The word should be shifted two letter spaces to the left.

In Plate 71 the photograph was printed upside down.

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THE *DEMIOPRATA* OF POLLUX X

After having made a number of references in the early chapters of Book X to an unidentified *Demioprata*, Pollux at last (X, 96) observes in his disjointed way that this word in its general meaning was used in comedy and by Lysias, and then adds: "On the Attic Stelai, located at Eleusis, is inscribed the property of those who dishonored the gods, which was sold by the state."¹ His usual introduction to a citation from this source is ἐν δὲ τοῖς Δημοπράτοις, but once (X, 148) he begins ἐν δὲ ταῖς Ἀττικαῖς στήλαις, once (X, 40) ἐν τοῖς Ἀλκιβιάδων, and once (X, 38) καὶ Ἀλκιβιάδων δὲ κτλ. In all there are thirty-four such citations: twelve of these can be immediately recognized as belonging to the Attic Stelai as we have them, and most of the rest are so clearly offered by Pollux as items from the same list that we can safely assume that when he refers to the *Demioprata* he always means the Attic Stelai. Pollux supplies us with a number of items of furniture and equipment which apparently appeared in sections of the Stelai now lost; these are collected below in Table A. In Table B are parallels between *Onomasticon* X and the present text of the Attic Stelai.

TABLE A. ADDITIONAL σκεύη FROM THE *Demioprata* OF POLLUX X

ITEM		POLLUX X
ἀλῶν τρία ἡμιφόρμια	one and a half <i>phormoi</i> of salt	169
ἄρτημα ὀβελίσκων	cord for hanging up spits	96
γαστρούπτης	utensil used in stuffing sausage	105
δευτήρ	utensil for mixing dry and wet parts of dough, or for basting	105
ἐκπιεστήριον	press (see Stele V, 10 for πιεστήριον)	135
ἐμμόχλια σιδηρᾶ	bolts for locking a door	23
ἡθμός ἐπικρητηρίδιος	strainer which fits on top of a <i>krater</i>	108
κανάστρον	an alternate spelling for καναύστρον	86
καλυπτῆρες ἱκρωτῆρες	upright tiles	157
καρκινὸς λίθους ἔχων	tongs for use in stonework	148
κέραμον Ἀττικὸν καὶ κέραμον Κορίνθιον	Attic and Corinthian tiles	182
κλιμάκιον	small ladder	171

¹ τὰ μὲν οὖν δημόπρατα οὐ μόνον τοῦνομα παρ' Ἀριστοφάνει ἐν τοῖς Ἰππεύσιν ἔστιν
ἐπίπαστα λείχων δημόπραθ' ὁ βάσκανος

ἀλλὰ καὶ παρὰ τοῖς ἄλλοις κωμωδοδισκάλοις· πρὸς δὲ καὶ Λυσία λόγος ἔστιν ὑπὲρ τῶν δημοπράτων πρὸς Εὐθίαν.
ἐν δὲ ταῖς Ἀττικαῖς στήλαις αἱ κεῖνται ἐν Ἐλευσίνι τὰ τῶν ἀσεβησάντων περὶ τὸ θεῷ δημοσίᾳ πραθέντα ἀναγέ-
γραπται. All references are to the text of E. Bethe, *Pollucis Onomasticon*, Teubner, Leipzig, 1900
and 1931. On Ἐλευσίνι see below, p. 324.

ITEM		POLLUX X
κνέφαλλον καινὸν καὶ κνέφαλλον παλαίον	new and old pillows (see I, 217-18 for κ. πλέον)	39
κόσκινον κριθοποιόν	sieve for barley (see V, 81 for κόσκινον)	114
κυμνοθήκη	cummin box	93
λουτήριον καὶ ὑπόστατον	washing tub and stand (see II, 233-4 for λουτήριον λίθινον)	46
μαχαίρια ἐλεφάντινα καὶ μαχαίρια κεράτινα	knives of ivory and horn	90
μολυβδοκρατευταί	lead frame on which a spit turns (two mss. read μολύβδον κρατηταί; μολύβδον κρατευταί may be the correct reading)	96
παρωλενίδας	an armful or bundle	170
πίνακες μαζήροί	trenchers for barley cakes	83
πρίων λιθοπρίστης	saw for stonework (cf. <i>I.G.</i> , I ² , 313, line 129)	148
προσκεφάλαιον λινούν καὶ ἔρεοῦν	linen and woolen cushions	40
ρίπαικὰ πλέκτον ²	wicker fan for blowing up a fire	175
τράπεζα μονόκυκλος	round table with top made of one piece	81
σκάφη μακρὰ καὶ σκάφη στρογγύλη	oblong tub for kitchen use, and a round tub	103
ὑπολήμιον	stand for a wine vat	130
φενακνίδα	alternate spelling for φιδακνίδα (see V, 21)	74

TABLE B. *Demioφrata* PARALLELS IN THE ATTIC STELAI

(All the identifiable references in Pollux are to Attic Stelai I, II, V, VI, and VII.)

	POLLUX X	ATTIC STELAI
ἀμφιτάπης	38	I, 164; 172
θύρα διάπριστος	24	II, 13-14
θύρα συνδρομάδη	24	II, 15-16
καλυπτῆρες κορινθιουργεῖς	157	VII, 98

² Bethe reads *ρίπαικὰ παγκτόν*. Alternate manuscript readings are *ρίπαι καί*, *παγων*, *παγωντον*. Whatever the correct form of *ρίπαικά*, its meaning is clear from the context, and *πλέκτον*, an easy emendation from the meaningless *παγκτον*, is perfectly suitable to the passage, which moves on to mention similar wicker (*οἰσύνος*) equipment.

	POLLUX X	ATTIC STELAI
κάναυστρον	86	I, 237
κηρωτή	150	I, 63
κιβωτὸς θυριδωτή	137	V, 16
κλίνη ἀμφικνέφαλλος ³	36	I, 233
λέκος	87	II, 116
ληνός	130	VI, 137
πίναξ ποικίλος . . . καὶ πίναξ ἕτερος γεγραμμένος	83	VII, 59 ff.
προσκεφάλαιον σκύτινον	40	II, 216-17
ράκια (καὶ κηρωτή)	150	I, 163
σησάμων ἡμισάκιον	169	II, 136-7
χαμένην παράκολλος	36	I, 231

An interest in epigraphy is a surprising quality to find in a second-century lexicographer, even one who lived at Athens. We who have only fragments of the inscription would like to discover where Pollux found his text of the Attic Stelai, and whether it was full and accurate.

In the first nine books of the *Onomasticon* there are only nine scattered passages which could suggest that Pollux might have made use of a non-literary source. In III, 39, at the word *protoposis*, is the statement: "This term is written in the laws of the king archon."⁴ The marker which indicates mortgage of land is defined as a *sanis* or *stele* in III, 85, but the fact that the mortgage-pillars were inscribed is not mentioned. In VII, 61, there is an allusion to the statues of Kleobis and Biton in Argos; they are not mentioned, however, because there was an inscribed base, but because the sculpture illustrated a certain type of clothing. The custom of dedicating *anathemata* is treated briefly in I, 11, and in V, 149, terms for writing upon stelai are listed, but Pollux appears to be quite unaware that dedicatory inscriptions had been gathered and published by Polemon. In V, 166, there is a discussion of the proper terms used to describe legal and public inscriptions, and again, in speaking of Athenian political processes in Book VIII, Pollux several times (c. 46, c. 128) indicates that inscriptions would be made at certain points, yet with all his pedantry he makes no reference to the collections of epigraphical texts which could have provided him with a wealth of citations.⁵

³ On the stone it is κλίνη Μιλησιουργῆς ἀμφικέφαλος.

⁴ Cf. Polemon *ap.* Athenaeus, VI, 234 f.

⁵ Philochoros' collection of epigraphical texts, the Ἐπιγράμματα Ἀττικά, was made probably in the early years of the 3rd century B.C. No portions of it remain, but the title has led Böckh and others to assume that the inscriptions included were exclusively metrical. Jacoby, however, believes that the *Epigrammata* may have been selected from various types of inscriptions, and concludes:

It has been argued, however, that Pollux knew and used Krateros' *Ψηφισμάτων συναγωγή*, a work which offered texts of a large number of Athenian inscriptions, mostly from the fifth and fourth centuries, with full commentaries.⁶ Once, indeed, Krateros is explicitly cited (VIII, 126); the word *nautodikai* is under discussion, and Pollux adds to his very brief definition the statement: "If one may trust Krateros, who collected the *Psephismata*, those who are unwilling to open proceedings are called *hubristodikai*—this word was current in Sicily." It happens that Harpokration (*s.v.* *ναυτοδίκαι*) has preserved a fragment of the very Krateros commentary to which Pollux must refer, and the first thing one notices is that Pollux, in defining his major heading (*nautodikai*), has made use of none of the many details which Krateros provided. It is thus more probable that the exotic term *hubristodikai* comes from a predecessor in the lexicographic tradition than that Pollux himself found it in the *Psephismata*. This leaves us in some doubt as to the origin of his reference to Sicilian usage; it may belong to Krateros, or it may have been added by Pollux's lexicographer.⁷

A second passage in which a reference to Krateros may exist is VII, 15. Here Pollux is discussing buying and selling, and he says, "In the Attic *psephismata* which grant privileges to foreigners, one can find *εἶναι αὐτῷ οἰκίαν ὠνεῖσιν*." The troublesome thing here is that it is not possible to find such a phrase among surviving inscriptions. For some reason the word *ὠνησις* has been restored in *C.I.G.*, 3597b, an inscription from Ilium, but actually it occurs only in this chapter of the *Onomasticon*. The formula to which Pollux seems to refer uses the word *ἐγκτησις* with the genitive, as in *I.G.*, II², 360, line 20: *εἶναι δ' αὐτοῖς καὶ γῆς καὶ οἰκίας ἐγκτησιν*.⁸ It seems likely that Pollux's *hapax* sprang from an erroneous reading, and that his use of *οἰκίαν* is also a mistake.⁹ He has taken the word in good faith as a derivative of *ὠνέομαι*, but if the

"This may, incidentally, be the first collection of its kind and would in that case be the genuine predecessor of Krateros' *Psephismata*" (*F.G.H.*, III B, Supp. I, p. 228). Krateros' fuller collection was made only a decade or so later, and was given considerable use during the first five centuries after Christ, as is proved by the list of works in which fragments have been found (see *F.G.H.*, III B, 342; P. Krech, *De Crateri Ψηφισμάτων συναγωγῇ*, diss. Greifswald, 1938, pp. 94 ff.). Polemon's publications of dedicatory inscriptions and antiquarian curiosities were made in the first decades of the second century B.C. and were used by Athenaeus (VI, 234 f; X, 436 d; 442 e; XI, 472 b; 486 d; XIII, 587 c); the collection of Menetor, *Περὶ ἀναθημάτων*, was probably similar, although we cannot be sure that it contained Attic texts (Athenaeus, VIII, 594 d; *F.H.G.*, IV, p. 452). Other ancient epigraphers who worked with non-Attic inscriptions are listed by Böckh in the preface to *C.I.G.*, I.

⁶ Plutarch, *Arist.*, 26, 1-2. See Krech, *op. cit.*, *passim* and Jacoby, *R.E.*, *s.v.* *Krateros*.

⁷ Krech, *op. cit.*, p. 22, takes these words too as a part of the Krateros commentary, and then must argue that this is not evidence of the inclusion of non-Attic texts in the *Psephismata*.

⁸ The same formula appears in *I.G.*, II², 8, line 17; 351, line 29; 505, line 53; 554, line 30. With slight variations it is used in *I.G.*, II², 237, line 25; 884, line 5, and *I.G.*, I², 110, line 30. See also *R.E.*, V, 2584, and A. Billheimer, *Naturalization in Athenian Law and Practice*, Princeton diss., 1922, pp. 21-22.

⁹ Dittenberger in his index lists only four uses of *οἰκίος*, none of which suggests this context.

source in which he found it had been the full collection of Krateros' *Psephismata*, the formula granting the right to buy property would have appeared again and again, surely not each time with the same error. Once more, the conjecture which best fits the facts is that Pollux did not know the epigraphical texts of Krateros at first-hand, but had instead come upon an isolated (and inaccurate) reference to them in the work of some Alexandrian word-collector.

Thus there is no evidence in the first nine books of the *Onomasticon* to convince us that Pollux had ever consulted the text of a single inscription. The effect of Book X, however, is wholly different. There the *Demioprata* is cited more often than any other individual source and only less frequently than all of Attic comedy together. This is true despite the fact that when the word *demioprata* came up originally in VII, 13, Pollux apparently did not know of its application to the forced sale of Alkibiades' property. Of course, the final book of the *Onomasticon* sets out to be different from the others, for it was written to refute the criticisms which Phrynichos had made of the earlier books.¹⁰ Apparently the treatment of tools, implements, and household equipment had suffered most at Phrynichos' hands, for this is what Pollux chose to review. Words already treated are brought up again in Book X, and there is everywhere fuller documentation. It is possible that as a part of this tightening of defenses and search for reinforcements Pollux at last sought out a collection of inscriptions and studied the text of the Attic Stelai in quest of genuine fifth-century terminology.

Böckh believed that Pollux used a collection entitled *Demioprata*, which included lists of confiscated property and also some temple records.¹¹ This conclusion is a by-product of his interpretation of Athenaeus, XI, 476 e, where he would read, "One can find in the *Collection of Demioprata* this inscription from a stele on the Acropolis which includes votive objects: 'silver drinking horn, etc.'"¹² Böckh's conjecture is on the whole unacceptable; he cannot explain why, with a whole collection of inscriptions, all related to moveable property, Pollux should have chosen to use only material from the Attic Stelai. It is extremely unlikely that such a specialized collection was made in ancient times, but had it been done, it is quite certain, as Köhler pointed out,¹³ that the blunder of calling temple records *demioprata* would never have been committed. It is much more reasonable to give up trying to make sense of the Athenaeus passage as it stands, and to follow Kaibel in marking a lacuna after οὕτως, on the assumption that the item cited as *demioprata* has been lost, and that the silver drinking cup belongs to another inscription.¹⁴ There is no way of knowing whether the lost item came from

¹⁰ M. Naechster, *De Pollucis et Phrynichi Controversiis*, diss. Leipzig, 1908, pp. 29, 34; Bethe, *R.E.*, s.v. *Iulius (Pollux)*, 777, 778.

¹¹ *Staatshaushaltung der Athener*³, I, p. 252; II, pp. 248-249.

¹² ἔστιν οὖν τοῦτο εὐρεῖν ἐν τοῖς Δημοπράτοις ἀναγεγραμμένον οὕτως ἐκ στήλης ἀνακειμένης ἐν ἀκροπόλει, ἣ τὰ ἀναθήματα περιέχει· κέρας ἔκπωμα ἀργυροῦν, κτλ.

¹³ *Hermes*, XXIII, 1888, p. 399.

¹⁴ See *I.G.*, II², 1407, line 38; 1408, line 17.

the Attic Stelai or from the records of some other confiscation; finally the Athenaeus passage offers no hint whatsoever as to the epigraphical source which Pollux was using in his Book X.

Köhler¹⁵ assumed that Pollux found his text of the Attic Stelai in the *Psephismata* of Krateros, and offered as 'proof' the assertion that the description of the Stelai in X, 96, contains echoes of the accusation of Alkibiades as we find it in Plutarch (*Alkibiades*, 22). It is indeed quite certain that Plutarch made use of Krateros when he wrote this section of the *Life* of Alkibiades,¹⁶ but the only phrase of his which might be heard as similar to Pollux occurs not in the text taken from the *Psephismata*, where the verb is ἀδικεῖν (*Alkibiades*, 22), but in the preliminary summary of the charge (ἀσεβεῖν περὶ τὸν θεόν: *Alkibiades*, 19), which was Plutarch's own.

If Pollux was using a full collection of texts, like the *Psephismata* of Krateros, it is very curious that he chose to cite only the Attic Stelai, and yet failed to use the Stelai time and again in his treatment of terms which we know appeared in the Attic Stelai lists.¹⁷ The impression left by Book X is that Pollux thought of the *Demioprata* as listing only furniture and household equipment, and that he could forget that the property listed had not all belonged to Alkibiades. Surely these misconceptions would not have persisted in the mind of one who knew Krateros' extensive explanations and commentaries. Altogether, it is hard to believe that a man who had not tried to use such a source when dealing with the workings of the Athenian state would now think of looking through a cumbersome corpus of public inscriptions to find information about furniture and kitchen implements.¹⁸ And there is no reason to assume anything so uncharacteristic; as a matter of fact, Pollux tells us at the outset, though with singular lack of grace, where his new material came from. Having heard, he says, of Eratosthenes' Σκευογραφικόν, he made a great search for it, but when he finally got hold of a copy it proved disappointing, and he was forced after all to find for himself the solution to many problems (X, 1-2). We may doubt, however, that he found his *Demioprata* references for himself, since their appearance in Book X is exactly simultaneous with Pollux's supposedly fruitless perusal of the *Skeuographikon*.

The *Skeuographikon*, which in Pollux's time was circulated as an independent work, was actually an extract, made by some later writer, from Eratosthenes' essay *On Attic Comedy*.¹⁹ It is certain that here, as in his historical investigations, Eratos-

¹⁵ *Op. cit.*, p. 398.

¹⁶ Krech, *op. cit.*, pp. 30 f.

¹⁷ In Book X Pollux cites the *Demioprata* for 42 items, but he treats 65 others which appear in our text of the Stelai without referring to the *Demioprata*.

¹⁸ See Jacoby, *R.E.*, s.v. *Krateros*: "Die Zurückführungen aus Pollux, der K. nur einmal (VIII, 26) aus lexikographischer Tradition zitiert, namentlich die der δημόπρωτα im 10. Buche gerade auf K., sind sehr zweifelhaft."

¹⁹ Knaack, *R.E.*, s.v. *Eratosthenes*: Naechster, *op. cit.*

thenes made use of epigraphical material, for one fragment²⁰ contains a discussion of the pyramids on which the Solonic laws were inscribed, and we know from Harpokration (*s.v.* ἄξονι) that this was one of the points on which Polemon, the old 'stone-picker,' criticized Eratosthenes as an inaccurate epigraphist.²¹ Inaccurate he may have been, but he was conversant with Attic inscriptions, and it would have been natural for him to make use of the Attic Stelai when he was dealing with the household terminology of Old Comedy. Even he probably did not take his text from the face of the stone; it is he who must have consulted the collection of inscriptions made by Krateros.²² Only in this indirect way do the *Demioprata* references of Pollux derive from the *Psephismata*.

If Pollux owed his Attic Stelai citations to the *Skeuographikon*, we can understand why he seems to have so inadequate an idea of what the inscription was, and why he is not always able to make use of it. It is clear too why fifteen references are made to the *Demioprata*, with no explanation of what this term may mean until we reach chapter 96, where it is identified as the list from the Attic Stelai. Evidently the first use of the *Demioprata* in the *Skeuographikon* was in connection with the word *μολυβδοκρατενταί*, and not until Pollux, treating items in his own order, reaches this word does he repeat Eratosthenes' introductory definition, and his description of the physical aspect and location of the stelai which were his source. The special use of the term *Demioprata* and also the identifying phrase 'Attic Stelai' were evidently taken from the Alexandrian scholar; one or both may have originated with Krateros.

Thus Pollux, far from having a complete and accurate text of the Attic Stelai before him, had only the scattered citations which had been taken from Krateros by Eratosthenes, and from Eratosthenes by the man who had extracted the *Skeuographikon* from the *Peri komodias*. This means that Pollux's citations may well show a fair rate of error, and that care must be exercised in making use of them. To begin with, in the passage already quoted (X, 96), in which Pollux identifies his *Demioprata* as the Attic Stelai, there is a question as to whether the word Ἐλευσῖνι should be honored, or whether it should be altered with Bergk to read Ἐλευσινίῳ.²³ If the text of Pollux is accepted unchanged, then we must accept too something like Köhler's conjecture that there were two nearly identical inscriptions, one in Athens and one at Eleusis, and that Krateros had taken his text from the latter.²⁴ Doubling of inscriptions was not a usual Attic practice, and this theory further forces one to argue that

²⁰ Frag. 37: *F.G.H.*, II, p. 1019.

²¹ Schol. Aristophanes, *Aves*, 11; Harpokration, *s.v.* ἄξονι; Strabo, I, 15. We may note that Pollux, VIII, 28, in discussing κύρβεις, follows Eratosthenes, not Polemon. See L. B. Holland, *A.J.A.*, XLV, 1941, pp. 346 ff.

²² Presumably not that of Philochoros, if Böckh, Krech, and others are right in thinking that it assembled only verse inscriptions.

²³ See Pritchett, *Hesperia*, XXII, 1953, pp. 234-235.

²⁴ *Op. cit.*, p. 400.

it is only coincidence which has caused all trace of the Eleusis inscription to disappear, while a major part of that at Athens has been recovered. Surely it is much easier to suppose that Krateros' original description of the Stelai as standing in the Eleusinion (Ἐλευσινίῳ) was misunderstood at one of the stages in the transmission of this information to Pollux, and that Pollux, who seems to have had little curiosity about such matters, never bothered to check the location of the inscription.

Three times Pollux uses the name Alkibiades when he mentions an item from the *Demioprata*, and it is tempting to try, with his help, to assign specific pieces of property in the lists to Alkibiades' household. In X, 38, while discussing rugs and blankets, Pollux remarks that "a certain *amphitapes* of Alkibiades was sold," and here his information about the owner of the rug is presumably based on an identification made by Eratosthenes, who could consult a full text of the Stelai, where the confiscated properties were listed in groups under headings naming the dispossessed owner, and who consequently knew to whom each item had belonged. In the incomplete text which we have of the inscription, the word *amphitapes* appears in just one place, near the end of Stele I, where nine rugs of different sorts are listed. Since the rug noted by Eratosthenes need not have been from this group at all but could instead have appeared in some other section of the Stelai now unreadable, this one Pollux citation would not by itself give sufficient ground for assuming that the last section of Stele I lists Alkibiades' personal possessions. However, Pollux identifies as Alkibiades' two more items which occur in the same part of Stele I; the inlaid couch and the bed with two head-rests of *Onomasticon*, X, 35-36, can be found listed at I, 231 and 233, and the appearance in the lexicon of the special descriptive adjectives, *parakollos* and *amphikephalos*, makes it quite certain that Pollux's terms derived from this exact location in the Stelai. It is safe, then, to assume that somewhere between line 49 of Stele I, where the last item which certainly belonged to Kephisodoros is listed, and line 157, where the group containing the *amphitapetes* begins, came two lines stating that the property next listed had belonged to Alkibiades (cf. I, 12-13). This means that the ample supply of rugs, curtains, pillows and coverlets, the expensive beds, the chests, and the foppishly long list of *himatia* may all be thought of as the personal possessions of Alkibiades. Apparently the beginning of Stele II, which seems to follow immediately upon Stele I, continues the same list of properties at least through line 60.

A second case where Pollux may help to identify certain items as the property of Alkibiades is less clear. Meritt has supposed²⁵ that the *proskephalaia skutina* of Stele II, 216, were the originals of the leather pillow in Pollux X, 40, where the lexicographer writes: ". . . clearly they (pillows) were also made of leather and wool, since among the confiscated properties of Alkibiades were a *proskephalaion skutinon*, one of linen, and one of wool." If Meritt is right, then somewhere between line 206

²⁵ *Hesperia*, V, 1936, p. 384.

and line 216 there once stood a notice that the property following had belonged to Alkibiades, ending the thus very short listing for Phaidros, which begins at line 188. We might also expect, between the announcement of Alkibiades' ownership and line 214, listings of linen and woolen pillows, each occupying two lines, for terms coupled by Pollux are usually found in close conjunction on the stone (see for instance, in Table B, *rakia* and *kerote*, *chameune parakollos* and *kline amphikephalos*, *thyra diapristos* and *thyra syndromade*). Lines 214 and 215 must then have contained an item or items interrupting the listing of pillows, for whatever word stood in line 214 was shorter than *proskephalaia* by at least four letters; it may be noticed that one item also separates the pair of terms in Pollux, X, 36, which appear as Stele I, 231 and 233. If all of these suppositions were correct, we would thus lack but one line of completely filling the space between line 206 and line 214 of Stele II, as it has been restored, and we would consider everything listed from line 216 to line 246 as having come from the household of Alkibiades. However, these conclusions are at best only tentative, for we know from vase-paintings that any Athenian house would contain a quantity of pillows of all sorts; they might be expected to turn up among the furnishings of all the condemned men. There is no way to be sure that the one leather pillow which happened to have been inscribed on a portion of stone destined to survive was the same leather pillow which, listed with others as the property of Alkibiades, caught the eye of Eratosthenes and was reported by Pollux. The household equipment listed at Stele II, 216 ff., may have belonged to another of the men, most probably Phaidros, and the *proskephalaia skutina* which Pollux mentions as Alkibiades' may have been listed somewhere else entirely—in Stele I, for instance, along with the pillows and coverlets of lines 217 ff.

The question of Pollux's accuracy has some importance, too, in a consideration of the relationship between *Onomasticon*, X, 83, and the *pinax* items found in Stele VII, 59 ff. Pollux first considers *pinakes* as plates for food, but he adds that there are also *pinakes* which are pictures, *ὥς καὶ ἐν τοῖς Δημοπρατοῖς ἔστιν εὐρεῖν καὶ πίναξ ποικίλος ἀπ' ὀροφῆς καὶ πίναξ ἕτερος γεγραμμένος*. On the stone we find

πίν[ακες γεγραμμ]έ[νοι — —]
 πίν[αξ ἕτερ]ος σμικρός
 γεγ[ραμμένο]ς
 [πίναξ ποικί]λος.

Bethe has surrounded everything in the Pollux text after *εὐρεῖν* with quotation marks, as though these words were a direct quotation from the Attic Stelai. If this were precisely accurate, we would have to conclude either that there were two places in the Stelai (VII, 59, and another which has vanished) where nearly the same groupings of *pinax* items were made, or, with Köhler, that there were two slightly varying versions

(Attic and Eleusinian) of the inscription, and that Pollux's quotation came from the stelai which have disappeared. However, closer inspection will show that neither of these conclusions is necessary, for we can after all identify Pollux's fragment with these lines from Stele VII, and account for his variations quite simply. It is immediately evident that Pollux's citation has been somewhat altered, for the two *καί*'s would not have appeared on the stone. In addition, Pollux's items seem to have got out of order; in the listing as he gives it there is no reason for the word *ἕτερος*, since two distinct types of *pinakes* are being dealt with. Actually, *ἕτερος* would only be used in a grouping like that of Stele VII, where one item is to be distinguished from preceding items of exactly the same sort—one small *pinax* with a drawing on it was sold separately from an unknown number of others which differed only in size.²⁶ It is so unlikely that just these same circumstances prevailed in the sale of some other group of *pinakes*, listed in some other part of the Stelai, that we can here use the text transmitted by Pollux to restore the words missing on the stone. Eratosthenes was apparently most interested in the *pinax poikilos*, which he believed to have been of the special sort used in decorated ceilings (*ἀπ' ὀροφῆς*), and so he put it first among the plaques which he had found in the Attic Stelai.²⁷

I have argued that the *Demioprata* references were taken from the *Skcuographikon*, and not from the Stelai or from an epigraphical collection, but before we can finally conclude that Pollux made no direct use of inscriptions or their texts in preparing Book X, there are three more passages which must be examined, for at three points in Book X Pollux presents other bits of epigraphical evidence which have nothing to do with the Attic Stelai. In X, 60, Pollux reports on an *anathema*, set up in Athens by a certain Diogenes, which was called an *analogeion*. In this case, he says, one can't turn to the work of Eratosthenes for an explanation of the term, for it is there treated as something related to the preparation of books. Here is an explicit statement of independence from Eratosthenes, but it does not mean that Pollux had himself been poking about among the antiquities of the city; it is the strange term applied to it, and not the fountain itself or any inscription it may have borne, that interests him, and the word would come from a word-book, not from an inspection of the monument. In X, 146 reference is made to the text of an unknown stele: *ἐν δὲ τῇ ἐν Ὀλυμπίᾳ στήλῃ ἀναγέγραπται τρύπανα τρυπανίας ἔχοντα*. Pollux's failure to identify this inscription any more accurately suggests that its source was not an annotated epigraphical collection; the phrasing is much the same as that used to introduce an Attic Stelai citation and it is easy to believe that this reference was also culled from

²⁶ Compare the use of *ἕτερος* in *I.G.*, II², 1672, lines 152 ff.

²⁷ There are a few other variants in Pollux's citations: in X, 35, he writes *χαμείνη* for Attic Stelai, I, 231 *χαμείνα*; in X, 36, *ἀμφικνέφαλλος* for Attic Stelai, I, 233, *ἀμφικέφαλος*; and in X, 79, he states that a stand or base for a piece of furniture in the Attic Stelai is always *ὑπόστατον*, while we find *ὑπόσταθμον* on the stone (Stele II, 32-34).

the *Skenuographikon*. However, in X, 126, there is a reference to certain *σταθμία χαλκᾶ* listed among the *anathemata* on the Acropolis during the archonship of Alkibiades. The inscription is as usual badly identified, but if this is the archon Alkibiades of *I.G.*, II², 776,²⁸ then the list must have been inscribed around 250 B.C., and we cannot very well attribute it to Eratosthenes, who was by that time at Alexandria. Köhler believed that Pollux at this point was using Polemon's *Περὶ τῆς Ἀθήνησιν ἀκροπόλεως*, a collection of Acropolis dedications,²⁹ but nowhere else in the *Onomasticon* does Pollux show any acquaintance with Polemon's work. A more realistic supposition is that, pursuing his ordinary methods of composition, Pollux was here borrowing from another lexicographer, an earlier grammarian who may also have supplied to Book III, 39, its citation from the king archon's list. It was natural to him to accept occasional descriptions of ancient monuments from the pens of his predecessors, never allowing his eye to wander from the book in search of the relic itself. Pollux was interested in words because he wished to use them successfully among men who considered themselves learned, but he had no wish to study the past that had produced the language he sought to restore.

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²⁸ See Meritt, *Hesperia*, VII, 1938, p. 135. Böckh, *op. cit.*, I, p. 252, note f, has argued that Pollux's inscription, like the one listing the silver drinking horn in Athenaeus, XI, 476 e, was included in a specialized collection called *Demioprata*. He did not know of the later archon, and so assumed that Pollux had mistakenly referred to the archonship of Alkibiades when the inscription named him rather as treasurer. Thus Böckh would see here a reference to the fifth-century Alkibiades.

²⁹ *Op. cit.*, p. 398.

THE ARAB MOSQUE IN ATHENS

(PLATE 49)

AGORA I 3837 (Pl. 49, a) consists of four joining fragments of Hymettian marble. The fragments were found together on March 19, 1936, in a modern house wall north of the Church of the Holy Apostles in the southeast corner of the ancient Agora at Athens. The repaired piece measures 0.21 m. in height and 0.29 m. in maximum length. There are irregular fractures at each end and a nearly rectilinear fracture at the top. The lower edge, however, is preserved. Two fragmentary lines of Kufic Arabic inscription, carved in relief, cover the face. The letters range in height from approximately 0.075 to 0.08 m. The lines of inscription are framed by straight bands, also in relief, the lower being about 0.012 m. in height, the upper two about 0.01 m. The back of the stone (Pl. 49, b) is smooth. The base has an irregular profile (Fig. 1): for a distance of approximately 0.022 m. from the face toward the back it is roughly at right angles to the face; it then slants upward for about 0.05 m. Where this slanting surface joins the smooth back there is a low ridge, about 0.01 in height. The stone tapers in thickness from 0.063 m. at the bottom (including the ridge) to 0.035 m. at the broken upper edge.

The two fragmentary lines read as follows: ¹

— — له فعسى اولئك — —
— — امير المؤمنين — —

The upper line contains two and a half words—[Al]lah. For perhaps thes[e]— from the Qur'ān, *surah* IX, verse 18, which in its entirety reads:

إِنَّمَا يَعْمُرُ مَسَاجِدَ اللَّهِ مَنْ آمَنَ بِاللَّهِ وَالْيَوْمِ الْآخِرِ وَأَقَامَ الصَّلَاةَ وَآتَى الزَّكَاةَ وَلَمْ يَخْشَ إِلَّا اللَّهَ فَعَسَىٰ أُولَٰئِكَ أَنْ يَكُونُوا مِنَ الْمُهْتَدِينَ

“Verily only he shall visit the mosques of Allāh who believes in Allāh and the Day of Judgment and who is constant in prayer and pays the legal alms and fears only Allāh. For perhaps these may be among those who are rightly directed.”

The lower line contains the words *amīr al-mu'minīn*, “Commander of the Believers,” followed by the beginning of another indeterminate letter. These words are

¹ Toward the center of the fractured top of the fragment there are minimal traces of relief which might be the extreme lower portions of one or two letters, but so little is preserved that it is impossible to attempt any reconstruction of this probable first line.

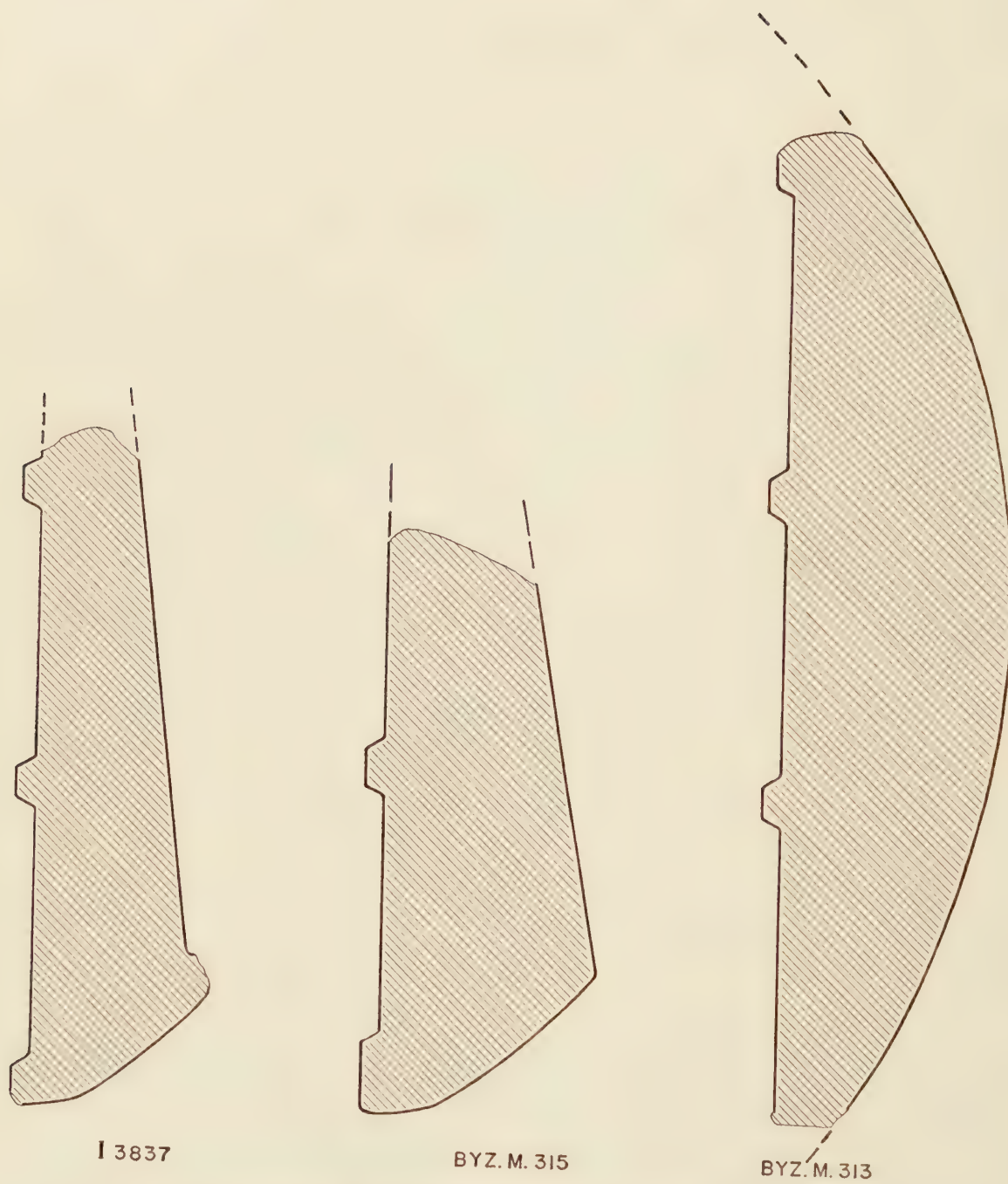


FIG. 1. Profiles of Agora I 3837, Byzantine Museum 315, and Byzantine Museum 313.

not Qur'ānic but must be part of a text of historical import, the implications of which will be discussed after the relationship of this fragment with at least two others has been established.

The first of these is now lost, but fortunately a photograph of it is preserved (Pl. 49, d). This fragment, the exact dimensions of which are unrecorded but which can be estimated to be approximately 0.30 m. in maximum length and 0.18 m. in height, is said to have been found during the excavations on the site of the Asklepieion in 1877. In 1916 it was photographed by G. Soteriou, now Director of the Byzantine Museum in Athens, and has twice been reproduced by him.² It is not clear exactly when this piece was lost; Mr. Soteriou believes that it may be somewhere among the many stone fragments scattered about the Acropolis.³ Not only is the style of Kufic on this fragment very evidently the same as that of the Agora stone, but the decipherment of the upper of the two fragmentary lines of text establishes beyond any reasonable doubt that the two pieces are part of the same inscription. The lines, separated as in the case of the Agora piece by a narrow band, read:

--- واليوم ---
 --- نشا هذا الجا ---
 [Allā]h and the Day.....
 [f]ounded this mos[que ?].....

Thus in the upper line we have another small bit of Qur'ān IX, 18,⁴ and it is evident that this fragment precedes (i. e., falls to the right of) the Agora piece and is separated from it by eight and a half words or approximately 0.85 to 0.90 m. As for the lower line, it is, like the lower line of Agora I 3837, part of an historical or com-

² G. Soteriou, 'Αραβικά λείψανα ἐν Ἀθήναις κατὰ τοὺς βυζαντινοὺς χρόνους ('Απόσπασμα ἐκ τῶν Πρακτικῶν τῆς Ἀκαδημίας Ἀθηνῶν, 1929—hereafter abbreviated Soteriou 1929—pp. 266 ff., fig. 1), and 'Αραβικαὶ διακοσμήσεις εἰς τὰ βυζαντινὰ μνημεῖα τῆς Ἑλλάδος ('Απόσπασμα ἐκ τῶν Πρακτικῶν τῆς Χριστιανικῆς Ἀρχαιολογικῆς Ἑταιρείας, 1935—hereafter abbreviated Soteriou 1935—pp. 57-95, fig. 6). This latter article also appears in *Berichte der Christlich-Archäologischen Gesellschaft zu Athen* (in *Byzantinisch-Neugriechische Jahrbücher*), 1935, pp. 233-269. My Plate 49, d is reproduced from the former article. I am indebted to Mr. Soteriou for giving me offprints of these two important articles and also for providing me with a photograph of fragment no. 313 in the Byzantine Museum (see below). I also had the privilege of discussing these Kufic fragments with him during a brief visit at the Byzantine Museum in 1954. In March 1956 he was good enough to permit me to have drawings made of the profiles of the fragments in the Byzantine Museum. May I here express my thanks also to Mr. Richard P. Braden for his generous help in translating Mr. Soteriou's articles.

³ Soteriou 1935, p. 60.

⁴ There are, to be sure, many other instances of **واليوم** preceded by **بِالله** in the Qur'ān; in fact the words occur again in the very next verse, Qur'ān IX, 19. But all the evidence taken together (including that of the other fragment about to be discussed) supports the assumption that the present occurrence is from Qur'ān IX, 18.

memorative inscription, and contains three words which can without any difficulty be made to fit into the context of the phrase, "Commander of the Believers." The words "founded this mosque" were first read by the distinguished Arabic epigraphist, E. Combe, now of the Swiss Archaeological Institute in Cairo, formerly Director of the Municipal Library in Alexandria.⁵ The present writer concurs. M. Combe did not attempt a reading of the few letters preserved in the upper line; without the clue provided by the upper line of the Agora fragment they would be virtually undecipherable.

The second related piece, also from the Asklepieion area, is a still smaller fragment, now in the Byzantine Museum and registered there as no. 315 (Pl. 49, c).⁶ A photograph of this stone also has been published,⁷ but no serious attempt has previously been made to decipher it.⁸ It is of Hymettian marble, triangular in shape, and measures approximately 0.25 m. in maximum length and 0.18 m. in height. It is fractured at both sides and at the top, but the lower edge (as with the Agora stone) is preserved. The thickness at the bottom is 0.08 m. and tapers to 0.05 m. at the top. There is no ridge on the back, but the base is bevelled, like the Agora piece (Fig. 1). Two fragmentary lines of inscription, separated by a band 0.02 m. in height are preserved; letter height ranges from 0.075 to 0.08 m. Again the style of epigraphy resembles that of Agora I 3837. Only two complete letters and parts of two others are preserved in the upper line, but the lower contains eight letters, of which the first six enable us to identify the fragment as belonging to the same inscription as Agora I 3837 and the lost piece from the Asklepieion. The fragment reads:

-- له --
 -- مهتدين ام --

It will be seen that all except the definite article of the word *المهتدين*, *al-muhtadīn*, "those who are rightly directed," is preserved; this word is separated by only three words from those in the Agora piece. The quotation from Qur'ān IX clearly ends here, because IX, 18 ends with this word, and IX, 19 begins with *أَجْعَلَمْ*, whereas the two remaining letters in the fragment are distinctly *ام*. The fact that the Qur'ānic passage falls on the bottom line here, and not, as in the case of Agora I 3837 and of the lost fragment, on the line above, posed a problem the solution of which came only

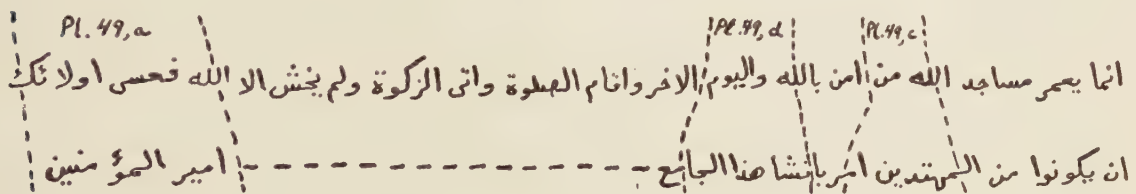
⁵ Soteriou 1929, p. 267: "on lit probablement '... cette mosquée a été construite...'"; Soteriou 1935, p. 60.

⁶ This photograph, together with that of Agora I 3837 and a new one of Byzantine Museum no. 313 (see below) were taken by M. Alison Frantz, who also measured the Byzantine Museum fragments and compared the fabric of those pieces with the Agora stone. I am greatly indebted to Miss Frantz for these chores, and to her and Homer A. Thompson I express my thanks for their encouragement and wise counsel in the preparation of this article.

⁷ Soteriou 1935, fig. 5.

⁸ *Ibid.*, p. 60.

after much frustrating reflection. It finally became apparent that the two complete and two partially preserved letters of the upper line of Byzantine Museum no. 315 are the *lām-hā* of *Allāh* and *mīm-nūn*, that is *man*, four and five words respectively from the beginning of the Qur'ānic passage; that this passage carries over from the upper to the lower line; and that this piece falls not, as one might expect, to the left of the Agora fragment, but to the right. The solution furthermore enables us to reconstruct the word immediately following *al-muhtadīn* as امر, 'amara, "ordered," i. e., the beginning of the historical inscription. Thus the three fragments are to be ranged as follows:



Still another possibly related fragment is preserved in the Byzantine Museum in Athens, registered as no. 313. This piece has twice been illustrated by Mr. Soteriou,⁹ and is here reproduced in a new photograph in Plate 49, e. It is reported to have been found in the excavations of the Roman agora, within the Tower of the Winds, and was perhaps transported there, along with some Turkish gravestones, from the site of the Asklepieion.¹⁰ Mr. Soteriou believes this to be the piece from which J. Strzygowski made an inaccurate and partial sketch in 1888, and which Max van Berchem quite understandably was unable to decipher but which he believed might be assigned on the basis of style to the 11th or 12th century. Strzygowski stated that he found the fragment on the south slope of the Acropolis near the Asklepieion.¹¹ This piece is also of Hymettian marble, and measures approximately 0.30 m. in height, 0.21 m. in width and 0.073 m. in maximum thickness. The letter heights range between 0.075 and 0.085 m.; in other words they are approximately the same height as those of the Agora piece and Byzantine Museum no. 315. Both top and bottom edges appear to be preserved, but the stone is fractured at both sides. There are three fragmentary lines of inscription, separated as in the other pieces by linear bands approximately 0.01 m. in thickness. The Kufic characters closely resemble those of the three other fragments: note especially the *mīm*'s and the detached ornament pendant from

⁹ Soteriou 1929, fig. 2, and Soteriou 1935, fig. 4, where the reproduction is upside down.

¹⁰ Soteriou 1929, p. 267; Soteriou 1935, p. 60.

¹¹ Max van Berchem and Josef Strzygowski, *Amida*, Heidelberg, 1910, p. 372, fig. 324. The sketch bears a general resemblance to Byzantine Museum no. 313, but certainly it is not an exact copy of any part of it.

the band separating the two lower lines, quite similar in style to that which appears in the lower line of Agora I 3837.

The first two lines of Byzantine Museum no. 313 have unfortunately so far eluded all attempts at decipherment.¹² Certainly neither of them seems to contain any part of Qur'ān IX, 18. In the first line one can read للذين, *li'ladhīna*, but while there are frequent occurrences of this combination of preposition and pronoun in the Qur'ān, none seems to be preceded by a combination of letters resembling those in the fragment. The word علم could be read in the center of the second line. The first three letters of the third line appear to read حمد, and one might easily postulate a preceding *mīm* or *alif*, giving us محمد or احمد, *Muḥammad* or *Aḥmad*. Following this word there is a three-letter combination which can be read عمل, *'amala* or *'amal*, "made by" or "work of." Both words suggest that we have here part of an historical inscription.

Not only does the style of epigraphy of this piece point toward a connection with Agora I 3837, the lost piece and Byzantine Museum no. 315, but a study of the profiles of the three available fragments (Fig. 1) demonstrates beyond any reasonable doubt that all three were cut from the same column drum, the radius of which was 0.265 m.¹³ But we must for the time being, pending decipherment of Byzantine Museum no. 313 and the possible discovery of other fragments, leave open the question of its exact relationship with the other pieces.

Turning now to an analysis of the content of the inscription of which Plate 49, a-d, at least, form a part, let us first review briefly the observations made by other writers in connection with the Kufic fragments from Athens available before Agora I 3837 came to light.¹⁴ Strzygowski, commenting on the inscription represented by his sketch (possibly drawn, as stated above, from Byzantine Museum no. 313), suggested the possibility of the presence of Moslems in Athens in the 11th or 12th century,¹⁵ or "um das 11. Jahrhundert."¹⁶ Mr. Soteriou, distinguishing between true Kufic inscriptions in Greece and pseudo or imitated Kufic Byzantine inscriptions and ornamentation (as did Strzygowski), and relying on Combe's reading of the lower

¹² M. Combe also was unable to decipher it (Soteriou 1929, p. 267).

¹³ I wish to thank Mrs. Alikı Bikakı of the Agora staff for drawing these profiles.

¹⁴ A personal note is perhaps not out of place here. The Agora fragment first came to my attention in May 1954, when I was spending two happy weeks at the Agora making a summary report on the Islamic (chiefly Ottoman) coins found in upper levels throughout the excavations. I was asked to look over the inscriptions in Arabic character that had turned up in the Agora and to suggest whether any of them deserved publication. All but this one piece under discussion were Turkish gravestones. The Kufic characters naturally captured my eye, and the significance of the words in the lower line was immediately apparent. The fragments of the Byzantine Museum were then brought to my notice. After the Qur'ānic quotation in the upper line of the Agora piece emerged, and the complementary bits from the same passage in the Byzantine Museum fragment and the lost piece were identified, it became apparent that all three pieces should be discussed together.

¹⁵ *Op. cit.*, p. 372.

¹⁶ *Ibid.*, p. 375.

line of the lost fragment, assumed the existence of a mosque in the 10th or 11th century in the area of the Asklepieion.¹⁷ He does not entirely reject the thesis advanced by D. Gr. Kampouroglou that there was an attack on Athens by Arabs, followed by an Arab settlement there, in the 10th century.¹⁸ Kampouroglou's argument¹⁹ was based upon a fresh examination and interpretation of a poem commonly referred to as the "Lament of Athens." This poem, preserved in a 16th or early 17th century manuscript in the former Imperial Public Library of St. Petersburg, has usually been interpreted as a "lament" over the capture of Athens by the Ottoman Turks in 1456, but Kampouroglou concluded that it actually relates to a capture of the city by the "Saracens" either between 896 and 902 or else in 943. To support his hypothesis he cited the epigraphical discussions of van Berchem, Strzygowski and Soteriou,²⁰ and reproduced the lost fragment (our Pl. 49, d), Byzantine Museum no. 313, and a simulated Kufic fragment of Pentelic marble, also in the Byzantine Museum.²¹

Whatever the virtues or demerits of Kampouroglou's argument, he unfortunately relied on a certain "Mufti Hamdullah" of Constantinople for readings of the inscriptions and on the latter's advice rejected Combe's decipherment of the lower line of the lost fragment. The Mufti doubtless was both a good man and a good theologian, but patently not an epigraphist or an archaeologist, for in Byzantine Museum no. 313 he read: "O Toi! qui satisfait les necessités (les besoins)," in the lost fragment, "(Dieu) est celui qui dispose (le dispensateur) des succès," and in the simulated Kufic piece, "O Toi, le Donateur de tous les bienfaits!"²¹ He added that such words as *Allāh*, *Rasūl* and *Muḥammad* appear elsewhere in the inscriptions. To the Arabic epigraphist it is of course obvious that these readings are purely imaginary. Furthermore, in rejecting Combe's reading, the Mufti appears to have been responsible for a statement to the effect that Moslems were forbidden to place historical inscriptions on mosques.²³ Nothing could be farther from the truth: there are innumerable foundation inscriptions on mosques of all periods throughout the Islamic world. However, neither the Mufti's readings, allegedly Qur'ānic phrases, nor this latter observation, in his view or in that of Kampouroglou, excluded the possibility that the Kufic fragments adorned a mosque of the 10th or 11th century in Athens.

¹⁷ Soteriou 1929, p. 268; Soteriou 1935, pp. 60, 90-91.

¹⁸ Soteriou 1929, p. 272; Soteriou 1935, p. 88.

¹⁹ Dimitriou Gr. Kampouroglou, *Ἡ Ἀλωσις τῶν Ἀθηνῶν ὑπὸ τῶν Σαρακηνῶν*, Athens, 1934. For Kampouroglou's earlier relevant publications, see Soteriou 1935, pp. 88 and 90, and Setton (see below), p. 315. Cf. *Social Science Abstracts*, II, 1930, no. 273.

²⁰ Kampouroglou, *op. cit.*, pp. 159 ff.

²¹ Soteriou 1929, fig. 3; again illustrated in Soteriou 1935, fig. 7.

²² Kampouroglou, *op. cit.*, p. 186. These readings, in Arabic, modern Turkish transliteration, Greek and French, are reproduced in handwriting in a cut on p. 182. The Arabic phrases are: *يا كافي المهمات* (الله) *ولي التوفيق* (يا) *قاضي الحاجات* (the translations are not properly paired off).

²³ *Ibid.*, p. 180.

Finally, both the true Kufic fragments under discussion (excluding of course the newly discovered Agora piece) and the pseudo-Kufic or imitation Kufic inscriptions and decorative elements widely scattered throughout Greece have been recently discussed in an admirable article by Kenneth M. Setton entitled, "On the Raids of the Moslems in the Aegean in the Ninth and Tenth Centuries and their Alleged Occupation of Athens."²⁴ His treatment of the inscriptions is largely based on Soteriou's important contributions, but he follows Kampouroglou in discarding the reading "... this mosque was founded . . .," and unfortunately repeats the unfounded assertion that "the religious custom of the Moslems expressly forbids putting upon the walls of a mosque any historical record of its foundation."²⁵ Setton concludes that there was a colony of Moslems (possibly captives) in Athens around the year 1000, that they had a mosque on the site of the Asklepieion, but that the evidence for a Moslem occupation of the city is very slight.²⁶

So much for the previous treatment of these fragments. Let us now turn to a closer examination of the texts. To begin with the religious text, it should be remarked that the passage, Qur'ān IX, 18, is one that is entirely suitable for the adornment of a mosque. In fact its use for this purpose is common and widespread. The earliest recorded epigraphical occurrence of the verse appears to be on the mosque of the Prophet at Medina (according to Ibn Rustah), dated 162-165 H. (A.D. 778-782).²⁷ It is present also on the mosque of Ibn Ṭūlūn in Cairo, dated 265 H. (A.D. 878/9);²⁸ on a displaced mosque inscription in Cairo, dated 402 H. (A.D. 1011/12);²⁹ in an inscription from Nablus, ca. 411 H. (A.D. 1020);³⁰ on the great mosque at Esneh in Egypt, dated 474 H. (A.D. 1081/2);³¹ and on the minaret of the great mosque in Aleppo, dated 483 H. (A.D. 1090/91).³² In later centuries it occurs frequently, sometimes in abbreviated form.³³

Thus there is good precedent for the epigraphical use of this particular passage

²⁴ *A.J.A.*, LVIII, 1954, pp. 311-319.

²⁵ *Op. cit.*, p. 316.

²⁶ On the possibility of the existence of a mosque in the area of the Asklepieion see I. N. Travlos in *Ἀρχαιολογικὴ Ἐφημερίς*, 1939-41, p. 66. Travlos found no trace of a mosque among the actual remains; and he followed Kampouroglou in regarding the hypothesis of the mosque as being based on a false interpretation of the Kufic inscriptions. Cf. note 34, below.

²⁷ Ét. Combe, J. Sauvaget et G. Wiet, *Répertoire chronologique d'épigraphie arabe*, Cairo, 1931 ff., Vol. 1, no. 46. Cf. J. Sauvaget, *La Mosquée Omeyyade de Médine*, Paris, 1947, p. 58.

²⁸ *Répertoire*, Vol. 2, no. 682.

²⁹ *Ibid.*, Vol. 6, no. 2173.

³⁰ *Ibid.*, Vol. 6, no. 2310.

³¹ *Ibid.*, Vol. 11, no. 2733A (cf. Vol. 7, no. 2720).

³² *Ibid.*, Vol. 7, no. 2783.

³³ E. g., 6th century H.: Amida, 559 H., *Répertoire*, Vol. 9, no. 3258; 7th century H.: 'Alā'yah, 628 H., *Répertoire*, Vol. 11, no. 4029, cf. Ibrahim Hakki Konyalı, *Alanya*, Istanbul, 1946, p. 288; 8th century H.: Akshehir, 738 H., *idem*, *Akşehir*, Istanbul, 1945, p. 305.

from the Qur'ān from at least early 'Abbāsid times onward. Incidentally the context of the passage is equally apposite for the embellishment of a mosque, and is singularly relevant to a mosque in a foreign or distant land beyond the Dār al-Islām. Verse 17 reads: "The idolators have no right to visit the mosques of Allāh while bearing witness to unbelief against themselves; these are they whose doings are vain, and they shall remain in the Fire eternally." And verses 19-20: "Do you reckon the giving of drink to the pilgrims and the visiting of the Sacred Mosque as equal with the acts of him who believes in Allāh and the Day of Judgment and fights in the path of Allāh? They are not held equal with Allāh; for Allāh does not guide the unrighteous. Those who have believed and went out from their country and fought in the path of Allāh with their possessions and their souls are in a higher rank with Allāh; those are they who are the triumphant ones."

The very fragmentary historical text must now engage our attention. In the lost piece (Pl. 49, d) there can be almost no doubt whatever about the correctness of the proposed reading — نشاء هذا الجا —. In view of the reconstruction presented above, the first word in this fragment is to be completed بانشاء ("the building of"), preceded immediately by امر ("ordered"), two letters of which are preserved after the end of the Qur'ānic quotation in Byzantine Museum no. 315 (Pl. 49, c). Thus, "Ordered the building of this . . .".⁸⁴

The third word in Plate 49, d poses a more substantial question. In all the attendant circumstances one is predisposed to complete it as الجامع, *al-jāmi'* ("mosque"), as Combe did; but this reading should not be accepted without careful consideration. There is only one objection. In mosque inscriptions of the early centuries of Islam the common word for a mosque of any sort is مسجد, *masjid*, not *jāmi'*. In due course the latter word, for the Friday or congregational mosque, makes its appearance, first in combination with *masjid* (i. e., *masjid jāmi'*), later alone. But still in the mid-third century H., in epigraphy at least, a large Friday mosque is called *masjid*: e. g., the mosque of Ibn Ṭūlūn. The earliest recorded epigraphical use of *jāmi'* appears to be in Toledo in 423 H. (A.D. 1031/2).⁸⁵ Later in the same century we meet with the word in Esneh, 470 H. (A.D. 1077/8),⁸⁶ and in an inscription from the Alexandrian frontier, 477 H. (A.D. 1084/5).⁸⁷ From 485 H. (A.D. 1092) on, as van Berchem remarks, every large mosque is a *jāmi'*, while *masjid* is reserved for secondary mosques. But the

⁸⁴ Not to be excluded is the possibility that the builder did not construct a new building but adapted an old one for use as a mosque. Moslem princes sometimes took such liberties with the language of building inscriptions, and of course there are innumerable instances of the conversion of churches into mosques. Relevant is the conversion of the Parthenon church into a mosque (Michaelis, *Der Parthenon*, p. 55).

⁸⁵ *Repertoire*, Vol. 6, no. 2390.

⁸⁶ *Ibid.*, Vol. 7, no. 2719.

⁸⁷ *Ibid.*, Vol. 7, no. 2745. This plaque is in the University Museum in Messina. Note that this inscription also carries Qur'ān IX, 18.

preserved epigraphical evidence is sparse, and one cannot say with any certainty just when *jāmi'* begins to appear in building inscriptions. The literature offers more plentiful examples: *jāmi'* is rare with the historians and geographers until toward the middle of the 4th century H. (10th century after Christ); from then on it is common.⁸⁸ Thus, although one might expect the word *masjid* to be the more likely here, *jāmi'* is not out of the question.

The next fragment to be considered is Agora I 3837 (Pl. 49, a), separated from Plate 49, d, to judge by the Qur'ānic inscription, by about 0.85 to 0.90 m., as stated earlier. The question here is the context of the words *amīr al-mu'minīn*, "Commander of the Believers"; this question is an intriguing one, for the correct answer to it would go far toward explaining the historical significance of the entire inscription. What words preceded *amīr al-mu'minīn*, and what words, if any, followed? One might hope that somewhere about the Acropolis lie the fragments that will provide the true answers and that they will eventually be found. But meanwhile some speculation may be not without value.

The title *amīr al-mu'minīn* in this general period and area of the Islamic world was assumed only by the Caliph.⁸⁹ In view of the silence of the historians with regard to any occupation of Attica by the Arabs or their co-religionists, one can with fair confidence exclude the possibility that the title here refers directly to the Caliph, whether the 'Abbāsid Caliph in Baghdad, the Fātimid Caliph in Cairo, or the Umayyad Caliph in Cordoba. By this we mean that it is extremely unlikely that the inscription records the construction of a mosque, or any other building, in Athens on the orders of the Commander of the Believers himself. But there are two other possible explanations for the presence of the word. One is that the building was erected *fī-zamān*, "in the time of," or *fī-ayyām*, "in the days of," such and such a Caliph; the other, perhaps more probable, that the builder, or the patron under whose auspices the mosque was built, stood in a certain protocolary relationship to one or other of the rulers in question, and that he bore a title or honorific compounded with *amīr al-mu'minīn* as the second element.

Here there are several possibilities. The most likely—and incidentally the first to appear in epigraphy—is *mawālā*, "client" or "freedman." Numerous examples in the epigraphy of buildings, textiles and coins of the 2nd, 3rd, 4th and 5th centuries of the Hijrah could be cited. To note only a few building inscriptions of the 3rd-5th centuries, there are occurrences in Fustāt (Cairo) in 213 H. (A.D. 828/9) and 265 H.

⁸⁸ Max van Berchem, *Matériaux pour un Corpus Inscriptionum Arabicarum*, I, 1 (Égypte), *Mémoires de la Mission Archéologique Française au Caire*, Vol. XIX, 1894, pp. 172-174; cf. Johs. Pedersen, section C2 of the article *masjid* in the *Encyclopaedia of Islām*.

⁸⁹ See Max van Berchem, "Titres califiens d'Occident," in *Journal Asiatique*, 1907, pp. 258-270; and more recently, G. C. Miles in *Archaeologica Orientalia in Memoriam Ernst Herzfeld*, Locust Valley, N. Y., 1952, p. 168, and N. E. Elisséeff in *Bulletin d'Études Orientales de l'Institut Français de Damas*, XIV, 1952-1954, pp. 192-193.

(A.D. 878/9);⁴⁰ in Jerusalem in 216 H. (A.D. 831/2);⁴¹ many in Spanish cities, especially Cordoba, ranging in date from 318 H. (A.D. 930) to 366 H. (A.D. 977) or later;⁴² at Mayyāfariqīn in northern Iraq in 391 H. (A.D. 1000/1) and in 405 H. (A.D. 1014/5);⁴³ at various sites in eastern Iran and Turkestan in the first half of the 5th century H.;⁴⁴ and at Aleppo in 483 H. (A.D. 1090/1).⁴⁵ Instances of *mawlā amīr al-mu'minīn* on coins (beginning in the 2nd century H. and continuing into the 4th) and on textiles (*ṭirāz*), especially in Egypt in the 3rd and 4th centuries, are too numerous to mention.

Aside from *mawlā* there are other words designating officers of the Caliph which appear in inscriptions, but it would seem that they are never directly compounded with *amīr al-mu'minīn* but rather refer to him (his name and title having occurred earlier in the text) by the use of the genitival pronoun. Thus we have *عامله* ("his governor") in Mecca in 272 H. (A.D. 885/6);⁴⁶ *وزيره* ("his vizier") at Cordoba in 329 H. (A.D. 940/1);⁴⁷ *فتاه* ("his young slave") at Tarragona in 349 H. (A.D. 960/1);⁴⁸ *حاجبه* and *كاتبه* ("his chamberlain" and "his secretary") at Cordoba in 353 H. (A.D. 964);⁴⁹ *قائده* ("his general") at Baños de la Encima in 357 H. (A.D. 967/8);⁵⁰ and *عبده* ("his slave") in Cairo in 360 H. (A.D. 970/1).⁵¹ It is conceivable that inscriptions containing one or other of these titles in direct conjunction with *amīr al-mu'minīn* exist but have never been recorded.

The possibility of some other more lofty title, used as an honorific, rather than as the designation of a specific function or position, by a prince or a functionary subservient or loyal to the Caliph, is not to be excluded. While the vogue for complex and resounding epithets reaches its apogee in the 6th and 7th centuries of Islam (12th-13th centuries after Christ),⁵² there are already examples of such titles compounded with *amīr al-mu'minīn* in the epigraphy of the 5th century H. The earliest of these appears to be *صفيّ امير المؤمنين*, *ṣafī* ("the close friend of the Commander of the Believers"), applied to a vizier of the Fāṭimid Caliph al-Zāhir at Jerusalem in 426 H.

⁴⁰ *Répertoire*, Vol. 1, no. 189 and Vol. 2, no. 682.

⁴¹ *Ibid.*, Vol. I, nos. 209-210.

⁴² *Ibid.*, Vol. 3, no. 1131; Vol. 4, nos. 1306, 1382, 1485, 1499, 1562, 1578-1581; Vol. 5, nos. 1632, 1650, 1863, 1866, 1868. In many of the Spanish inscriptions *mawlā* is separated from *amīr al-mu'minīn* and occurs in the phrase "at the hands of" or "executed by" his *mawlā* (علي يدي موليه).

⁴³ *Ibid.*, Vol. 6, nos. 2085 and 2184.

⁴⁴ *Ibid.*, Vol. 6, nos. 2184, 2312-2313, 2331, 2335; Vol. 7, nos. 2489, 2626.

⁴⁵ *Ibid.*, Vol. 7, no. 2783. For a discussion of *mawlā amīr al-mu'minīn* see G. Wiet, *C.I.A., Égypte* II, 1 (*Mémoires de la Mission Archéologique Française au Caire*, Vol. LII, 1929), pp. 49-50. Wiet is not strictly correct in stating that *mawlā* disappears before the middle of the 5th century H.

⁴⁶ *Répertoire*, Vol. 2, no. 733. The dates here and below are the earliest in each case. There are many other instances.

⁴⁷ *Ibid.*, Vol. 4, no. 1306.

⁴⁸ *Ibid.*, Vol. 4, no. 1499.

⁴⁹ *Ibid.*, Vol. 4, no. 1562.

⁵⁰ *Ibid.*, Vol. 5, no. 1632.

⁵¹ *Ibid.*, Vol. 5, no. 1821.

⁵² Cf. Wiet, *loc. cit.*

(A.D. 1034/5).⁵³ Thereafter we meet with خالصة, *khālīṣah* ("sincere friend"), used by a Marwānid prince in Aleppo in 465 H. (A.D. 1072/3);⁵⁴ حسام, *ḥusām* ("sword"), with reference to a Turkish amir in the employ of the Fāṭimid Caliph in Egypt at Esneh in 474 H. (A.D. 1081/2), the same inscription as that cited above as an example of the use of the Qur'ānic passage;⁵⁵ يمين, *yamīn* ("right arm"),⁵⁶ ناصر, *nāṣir* ("assistant"),⁵⁷ and رضي, *radī* ("favored one"),⁵⁸ in Seljuq inscriptions at Damascus of 475 H. (A.D. 1082/3). Many other such titles, compounded with *amīr al-mu'minīn*, make their appearance in the 6th century of the Hijrah, but these are too late to have any relevance here.⁵⁹

Of the historical material in the fragments under discussion there remains the third line of Byzantine Museum no. 313, which we believe to be related with the others. As stated above, we may have a common name derived from the stem ḤMD and the word *'amal*, "the work of," either in substantive or in verbal form. Such an inscription, containing the name of a subordinate person connected with the building and the name of the architect or chief mason, might well follow the principal formulary ending in *amīr al-mu'minīn*; but in view of the very obscure character of this fragment and our inability to decipher the upper lines, any attempt at further reconstruction at this time would be fruitless.

Before summing up, a few observations should be made about the palaeographical aspects of the fragments. The absence of a specific date and the almost complete lack of reliable written source material that can be brought to bear on the inscription as an aid in placing it in its proper historical context makes the dating of the epigraphical style on the basis of its physical appearance more than usually important. Here unfortunately we are on very uneven ground and are embarrassed to a degree which only those who are familiar with the aberrations of Kufic epigraphy can fully appreciate. There are no sure criteria for the accurate dating of Kufic characters. One can of course easily differentiate in date between a highly developed floral or interlaced Kufic of the 5th or 6th century of the Hijrah and the straightforward, un-

⁵³ *Répertoire*, Vol. 7, no. 2409. In historical literature *ṣafī* as well as *yamīn* ("right arm") appear even earlier: applied to Buyid princes in 381 and 392 H. Cf. Wiet, *op. cit.*, p. 49 and the references there.

⁵⁴ *Répertoire*, Vol. 7, no. 2699.

⁵⁵ *Ibid.*, Vol. 11, no. 2733 A (cf. Vol. 7, no. 2720). I have omitted *عَدَّة امير المؤمنين*, *ibid.*, Vol. 7, no. 2704, under the year 466 H., because this inscription is not preserved but only reported by a mediaeval historian.

⁵⁶ *Ibid.*, Vol. 7, nos. 2735, 2737.

⁵⁷ *Ibid.*, Vol. 7, nos. 2734, 2736, 2737.

⁵⁸ *Ibid.*, Vol. 7, no. 2737. Also used by Nizām al-Mulk at Khargird in Khorāsān about 485 H. (*ibid.*, Vol. 7, no. 2799).

⁵⁹ Cf. Elisséeff, *op. cit.*, pp. 192-3, and G. Wiet in *Bulletin de l'Institut Français d'Archéologie Orientale*, Vol. XXX, 1931, pp. 286-291.

adorned and primitive character of a 2nd century inscription. But between these extremes, especially in the 3rd-5th centuries, the development of ornamental Kufic is extremely irregular, and the problem of dating by style is one of infinite complexity. There is, needless to say, no single genealogy or line of development. There are almost as many Kufic alphabets as there were artisans who designed and engraved them. The controlling factors are numerous and diverse: the material, the nature of the inscription, the wealth or poverty of the builder or the patron, the ingenuity or imagination of the calligrapher, the geographical region or the local traditions of the workshop, etc. Simplicity is not necessarily a mark of antiquity, nor is an elaborate style necessarily later, in certain circumstances, than a plain one.⁶⁰ Given a ponderable body of material from a particular area with clues here and there to the chronology, whether relative or absolute, one can with fair confidence assign an approximate date to undated inscriptions attributable within the applicable area and period of time. But such is not the case here. These fragments are the only true Kufic inscriptions so far recorded in Greece or the Aegean.⁶¹

This is not the place to discuss the development of styles of Kufic in areas of the Islamic world which might be relevant to the Athens inscription. Such a discussion would lead us too far afield. We must content ourselves here with pointing out certain characteristics of the alphabet (Fig. 2)⁶² used by the artisan. It will be observed that while for the most part the alphabet is a very simple one, it is not without individuality and a certain sophistication. The vertical letters all have wedge-shaped terminations and a pleasing balance is achieved by juxtaposing tops sloping alternately to the right and to the left. There are very few foliate or floral elements: the upward-curling tails of the two *hā's* (in Pl. 49, c and d), the less elaborate curving heads of the *dhāl* and *jīm* (Pl. 49, d), the trefoil caps to the *mīm's* (in Pl. 49, a and c; note also Pl. 49, e), and the independent foliate scrolls descending from the band separating the lines of inscription (Pl. 49, a; and again also note Pl. 49, e).

A particularly noteworthy feature is the descending bow-shaped ligature between letters: six instances in Plate 49, a, three in Plate 49, d, and four in Plate 49, c. In one case this curved element is present even within a single letter: the *sīn* in Plate 49, a. This feature—bow-shaped joints descending below the line as opposed to a purely

⁶⁰ As a striking example of extremely simple Kufic of late date, see the alphabet of the epitaph of Ka'b, datable to the early 6th century H. (J. Sourdel-Thomine, *Les Monuments Ayyoubides de Damas*, Livraison IV, Paris, 1950, p. 205). In the 5th century there are numerous examples of very simple and of highly involved Kufic almost side by side: cf. S. Flury, *Islamische Schriftbänder Amida-Diarbekr*, Basel, 1920, pls. I-VII and pl. VIII.

⁶¹ Soteriou 1935 illustrates a very considerable number of imitation Kufic inscriptions and decorative elements in Greece, some of the 10th century, others of later date.

⁶² This alphabet is compiled from the three fragments illustrated in Plate 49, a, c, and d; Plate 49, e, which presents a few other characters, has been omitted because its relationship to the others has not been established.

rectilinear base-line—is perhaps the most significant characteristic that might aid us in arriving at an approximate *terminus a quo* for the palaeography. Ernst Herzfeld once made a study of this feature of Kufic inscriptions: ⁶³ in general his findings were

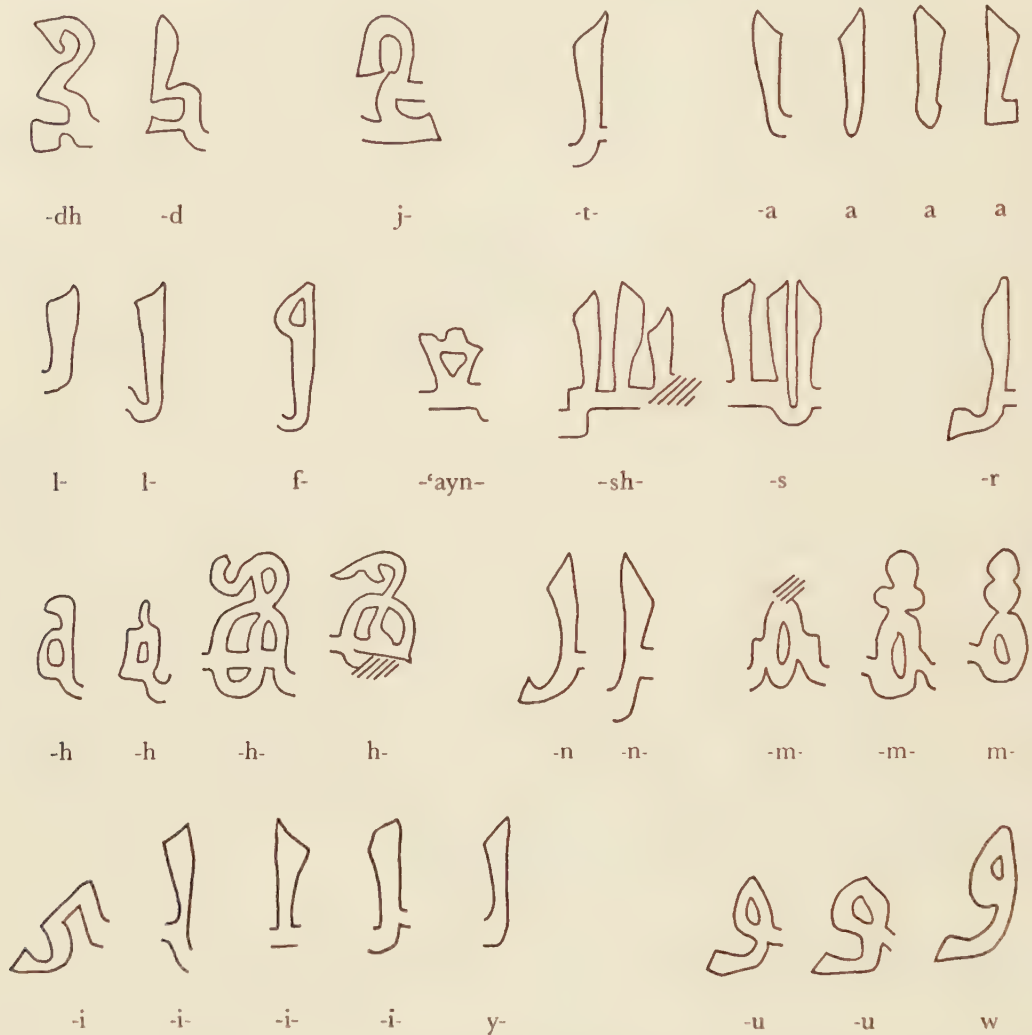


FIG. 2. Characteristics of the Alphabet of Agora I 3837, Byzantine Museum 315 and a Fragment found in the Asklepieion in 1877.

that ligatures are universally rectilinear in the 3rd century H., that gradually in the late 4th century (beginning with the word Allāh) the curved form is introduced, and that it is common, although not always present, in the late 5th century. The question

⁶³ E. Herzfeld, "Mashhad 'Alī, ein Bau Zengi's II a. H. 589," in *Der Islam*, V, 1914, pp. 360-4.

should be re-examined, for Herzfeld by no means surveyed all the available material: for example, there are instances of bow-shaped ligatures on Egyptian tombstones at least as early as 350 H. (A.D. 961/2);⁶⁴ and toward the end of the 4th century the phenomenon is very common.⁶⁵ At Cordoba in 354 H. (A.D. 965) there are frequent occurrences.⁶⁶ It is true that the practice carries on through the 5th century and even into the 6th, but it is unlikely that an inscription of the later 5th century would not bear other traits such as more elaborate foliation, upward-curving terminals to final letters in the lower register, etc.

The *mīm* with trefoil head is a distinctive characteristic of our alphabet, but unfortunately not a restrictive one. A quite similarly ornamented *mīm* appears in an Egyptian title of property dated as early as 268 H. (A.D. 881/2);⁶⁷ but then again we find it also in an inscription at Ḥarrān, dated 451 H. (A.D. 1059).⁶⁸

It is evident, therefore, that any attempt to date our inscription within a limited number of years on palaeographical grounds would be unjustified without the benefit of some closely related material for comparative analysis. Meanwhile one might tentatively propose for the physical aspects of the epigraphy a span of years from roughly 350 H. to, at the very latest, 450 H. (ca. A.D. 961 to ca. A.D. 1058), not however wholly excluding the possibility that it might be earlier.

As it happens, no date could be more inconvenient than 350 H. as a *terminus a quo* if we are to express an opinion on the probable historical context of the inscription. For it was in March of the year A.D. 961 that Crete was recovered from the Arabs by Nikephoros Phokas. The conclusive Arab defeat on that island, after an occupation of approximately 140 years, radically altered the strategic situation throughout the Aegean and the whole eastern Mediterranean. Before that date Arab raiders and pirates based on Crete roamed almost at will northward as far as the Hellespont: scattered references in the Byzantine literature inform us of attacks and depredations, and sometimes perhaps of somewhat protracted occupations, in many localities—the western Peloponnesus, the Gulf of Corinth, Aetolia, Attica, the Gulf of Volo, Thessalonica, Mt. Athos, and the islands of Aegina, Naxos, Paros, Patmos, Samos and Lesbos.⁶⁹ In other words, before that date an actual Arab occupation of Athens

⁶⁴ G. Wiet, *Stèles Funéraires* (*Cat. Gén. du Musée Arabe du Caire*), Vol. 5, Cairo, 1937, pls. XXXIII, XXXVI, etc.

⁶⁵ E. g., *ibid.*, Vol. 6, Cairo, 1939, pl. II, etc. Since writing these lines Dr. Richard Ettinghausen has, in another connection, drawn my attention to earlier instances of the bow-shaped ligature in media which I had not considered: e. g., on textiles, where it occurs as early as 283 H. (A.D. 896/7) (E. Kühnel and L. Bellinger, *Catalogue of Dated Tiraz Fabrics*, Washington, 1952, no. 73.366, p. 14, pl. VI); and on coins, as early as 282 H. (A.D. 895/6) (H. Lavoix, *Catalogue des monnaies musulmanes de la Bibliothèque Nationale*, Vol. I, Paris, 1887, no. 1047, pl. V).

⁶⁶ E. Lévi-Provençal, *Inscriptions Arabes d'Espagne*, Leiden-Paris, 1931, pl. III.

⁶⁷ *C.I.A., Egypte*, I, 1, no. 18 (*Répertoire*, Vol. 2, no. 696).

⁶⁸ D. S. Rice, "Mediaeval Ḥarrān," *Anatolian Studies*, II, 1952, pl. V.

⁶⁹ Full references to all these raids are conveniently brought together by Setton, *op. cit.*, pp. 312-314, 318.

is possible; after that date it is virtually out of the question. But both before and after 961 there could have been a "colony" of Moslem prisoners-of-war,⁷⁰ or even conceivably a settlement of traders.

Thus if the palaeographical and other internal evidence of the epigraphy were more positive, enabling us to date the inscription definitely before or after 350 H., we would be in a better position to express a clear-cut view as to the nature of the settlement. But neither the style nor the content of the inscription is sufficiently restrictive, and in both respects the evidence straddles a critical date. We must await, or find, more evidence, either locally or in the surrounding area. The first place to look is in Athens, around the Acropolis itself; one or two more small fragments of our inscription would solve many problems. Beyond the Greek mainland the arrow points toward Crete. There, if anywhere, we should find the epigraphical evidence that might provide at least the palaeographical link with known and datable forms of Kufic epigraphy. No Arab inscription from Crete has ever been recorded, although we have recently learned that the Amirs of Crete struck coins in gold and copper,⁷¹ and also perhaps in silver;⁷² it would be strange indeed if they left no epigraphical remains.

Meanwhile we can say this much: there was a mosque in Athens⁷³ bearing an Arabic inscription (both Qur'ānic and historical) in Kufic characters on Hymettian marble, cut from an ancient column drum; the builder, whether captor or captive, considered himself to be subject to, or at least in some protocolary or honorary relationship with, the ruling Caliph (which one is another question); and all the epigraphical evidence taken together suggests a date in the second half of the 10th century or the first half of the 11th. These are not daring pronouncements, but at least they provide a target for historians and archaeologists concerned with the mediaeval history of Athens.

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⁷⁰ Cf. Setton, p. 319. The prisoners could have come not only from Crete but from the southeastern frontier of Anatolia. But as prisoners would the Athenian Arabs have been permitted to mention the name of the Caliph in their mosque inscription? Would the Greeks have known whether they did or not?

⁷¹ Cf. J. Walker, "The Coins of the Amirs of Crete," *Numismatic Chronicle*, 1953, pp. 125-130; and G. C. Miles, "A Recent Find of Coins of the Amirs of Crete," *Κρητικά Χρονικά*, 1955, pp. 149-151. Since this article was written, I have reexamined a copper coin (*fals*) found in the Agora excavations (NN 4/27/39 #128), which in 1954 I was able only to attribute in a general way to the 8th or 9th century. Thanks to a more intimate knowledge of the coins struck by the Arabs in Crete gained during an archaeological reconnaissance of the island in April 1956, I am now able definitely to assign this coin to the Amirs of Crete.

⁷² See a forthcoming article by Ulla S. Welin in the *Numismatic Chronicle*.

⁷³ Even here one should make a reservation: might the mosque have been elsewhere—in Aegina for instance, where Byzantine sources record the presence of Arabs at one time—and the inscribed stone transported to Athens at a later date?

THE NORTH SLOPE KRATER, NEW FRAGMENTS

(PLATES 50-51)

THE calyx-krater of Exekias, first published in 1937,¹ was discovered at the bottom of a well in the American School excavations on the North Slope of the Acropolis in Athens. The circumstances of discovery indicate that someone had carried down the shattered krater from the Acropolis for the express purpose of throwing it into the well, which was then abandoned as a source of water, like several other wells on the North Slope. Had the fragments been thrown over the Acropolis wall together with other debris, it is unlikely that so many could have found their way together into the same well.² Some of the fragments, however, were lost on the way down; about a third of the vase is still missing. After the well had been excavated and the possibility of finding more pieces seemed remote, the vase was restored and placed on exhibit in the temporary Agora Museum.^{2a} The following season, however, brought to light two more fragments which were recognized as belonging to the calyx-krater. They were put inside the vase to be added at some future time and have now been inserted. The new fragments, which join the restored part of the vase, as shown in Plates 50 and 51, a, add new interest to the krater as a whole and enable us to appreciate the composition in two vital areas more fully than before. The scenes in the main zones of decoration, it will be recalled, are: A, the introduction of Herakles into Olympos; and B, the combat over the body of Patroklos.

The larger of the new pieces,³ from the center of the warrior scene (Pl. 50, a), preserves much of the two overlapping shields of the protagonists. On the right is the shield of Hektor with a triskele in black on white ground. An incised line, drawn by compass, sets off the rim. The white color is well preserved, in contrast to the white on the fragments found in the well, which had largely disappeared from being immersed in the water (cf. breastplate of Diomedes on left flank, Pl. 50, a). Hektor's opponent, who was probably Ajax, holds his shield so as to be seen from the rear; his two arms appear in front of it. In his left hand he grasps the handle of the shield, and with his right, which is not preserved, he wielded the spear. His arms and

¹ *Hesperia*, VI, 1937, pp. 469-486.

² Some of the other vases and bronzes found in the well may have been carried down at the same time, *Hesperia*, VII, 1938, pp. 188 ff. This is probably true of the poros head of Herakles from the archaic temple, *Hesperia*, VIII, 1939, pp. 91 ff. Other wells, containing much pottery, mostly isolated pieces, from the Acropolis were found in the same area. See Carl Roebuck, *Hesperia*, IX, 1940, pp. 141 ff.

^{2a} It is now exhibited in the ceramic hall in the reconstructed Stoa of Attalos.

³ When discovered it was shattered into many small fragments all found together. This had certainly happened after the piece had been lost on the way down from the Acropolis.

details of the shield are rendered with incised lines, the palmettes of the *ὀχάνη* in the center are painted white, the outer edge of the rim and the handle at the lower edge are in purple. The spiral design on his breastplate appears at the edge of the fragment beneath his right arm. At the upper edge of the shield is preserved the tip of his beard.

Exekias has varied the stance of the three Greek warriors. Diomedes, who is at the rear, holds his spear at waist height in position for an under-thrust. The man in front of him has thrown his arm back, raising the spear to the height of his head, in readiness to hurl or thrust at his opponent. The protagonist holds his right arm forward with bent elbow; he has already thrust his weapon at Hektor, whose spear-point is visible behind the shield of the Greek protagonist.⁴ These variations are paralleled by corresponding differences in the position of the shields. Hektor holds his in full face view toward the spectators and its rear turned toward his opponent's shield. A position such as this in actual combat would expose the fighter so as to give him no protection from his shield. It is inconceivable that a warrior would ever hold his shield in such a way that its inside would face the inside of his enemy's shield, as is the case in the picture. Diomedes' shield is held in much the same position as that of the protagonist, but somewhat further back so that the rim appears behind him. For the sake of contrast his breastplate was painted white. The shield of the middle warrior, also seen from the rear, is held so far forward that it nearly disappears behind the body and shield of the protagonist. Thus his whole body is shown in black against the red background of the vase. No parts of either spears or shields of the second and third Trojans on the right flank of the scene are preserved, but it is likely that the positions varied in somewhat the same way. The variations are an important feature of the composition; they break up the rigid symmetry of the picture and help to soften the parallelism within each group.

The second of the new fragments (Pls. 50, b and 51, a) almost completes the figure of one of the running satyrs that fill the space between the attachments of the handles in the lower zone. He is running toward the right, but his head is turned in the opposite direction. His head-band, beard, tail, and phallos are painted purple. The lively action of this figure is unrelated to the peaceful scene above, where a nymph is seated beneath a spreading vine. The contrast, whether intentional or not, is in harmony with the rest of the decoration. These isolated figures of nymphs and satyrs—rarely so unaware of each other's presence—and the grape-laden vines take the place of more usual forms of decoration round the handles. They are suitably chosen as indications of the purpose of the vase as a mixing bowl for wine.

Since my first article on the North Slope krater was published, some important

⁴ The position of the spear indicated by the middle warrior is the one usually depicted in combat scenes. For the less common position of the protagonist cf. the bearded hoplite who has just thrust his spear into the mounted Amazon on a cup in Bologna, Emanuel Löwy, *Polygnot*, fig. 8b; Pfuhl, *Malerei und Zeichnung der Griechen*, III, 504.

literature has appeared dealing with the art of Exekias and with the relation of the krater to the rest of his works.⁵ All have accepted the attribution to Exekias and the chronological order I proposed, placing the krater near the end of Exekias' career. Nikolaos M. Verdelis has recently published a new calyx-krater (Pl. 51, b-d),⁶ discovered in a tomb near Pharsalos in 1951, which is very closely related to the North Slope krater. The choice of motives on one side of the main zone and the subordinate elements of decoration are so similar on the two vases that it is hardly to be doubted that one was made in conscious, though far from exact, imitation of the other. Verdelis mentions and rejects the possibility that the Pharsalos vase could be the earlier of the two. His conclusion is certainly correct. The profile and proportions of the two vases show conclusively that the North Slope krater represents an earlier stage in the evolution of the shape. It is the earliest known example of the calyx-krater.

In his recent publication, *Attic Black-Figure Vase-Painters*, Professor Beazley lists the Pharsalos krater under the heading 'Manner of Exekias' and leaves the question open whether it was painted by Exekias himself or by a companion imitating the style and designs of his master. Viewed from the side depicting the battle scene the two vases are very much alike (cf. Pl. 50, a and 51, b). But there are some fundamental differences both in design and execution. These become apparent from the following list showing the principal similarities and differences between the two kraters.

SIMILARITIES

1. Shape (calyx-krater)
2. Rim decoration
3. Vine pattern above handles
4. Subject matter on B; position of Patroklos' body
5. Animal scenes on A and B

⁵ Ernest Buschor, *Griechische Vasen*, 1940, pp. 114 ff.; Bernhard Neutsch, 'Exekias, ein Meister der griechischen Vasenmalerei,' *Marburger Jahrbuch für Kunstwissenschaft*, XV, 1949/50, pp. 43-72; J. D. Beazley, *The Development of Attic Black-Figure*, 1951, pp. 63-74; *Attic Black-Figure Vase-Painters*, 1956, pp. 133-149.

⁶ Nikolaos M. Verdelis, *Καλικοειδής κρατήρ της τέχνης του Έχνηκιου*, 'Αρχ. Έφ., 1952 (published 1955), pp. 96-116. I am indebted to Mr. Verdelis for permission to republish the photographs on Plate 51, b-d, which I received from the files of the Archaeological Society in Athens through the kindness of Miss Artemisia Giannoulatou; and to Miss Alison Frantz for taking the photographs for Plates 50 and 51, a.

DIFFERENCES

*North Slope krater**Pharsalos krater*

Shape

- | | |
|--|---|
| 1. Proportion of height to diameter at top, 0.846: 1 | Proportion of height to diameter at top, 0.943: 1 |
|--|---|

Main Zone A

- | | |
|--|--|
| 2. Herakles' introduction into Olympos | Chariot scene with driver and two grooms |
|--|--|

Handles

- | | |
|--|--|
| 3. Handles flanked by horn-like knobs | Handles terminating in plastic volutes |
| 4. Tongue pattern at base of handles | No tongue pattern |
| 5. Seated figure beneath the vine | No figure beneath the vine |
| 6. Naturalistic rendering of vine leaves | Schematic rendering of vine leaves |
| 7. Running satyrs beneath the handles | No design beneath the handles |

Animal scenes

- | | |
|---|---------------------------------------|
| 8. Lions' manes rendered by incised S-pattern | Lions' manes rendered by purple color |
|---|---------------------------------------|

Bottom Zone

- | | |
|----------|-------------|
| 9. Plain | Ray pattern |
|----------|-------------|

There are many other differences in the style and drawing of anatomical details and in the use of accessory colors, incisions, etc. Verdelis pointed out that on the vase published by him the individual grapes in some of the clusters are indicated by incised lines, in others there are no incisions (Pl. 51, d). The omissions are doubtless to be explained as an oversight. On the North Slope krater, where the grapes are also separated by incised lines, the rendering is quite different. Likewise the rim pattern on the Pharsalos krater is accentuated by incised lines, whereas the North Slope krater, using the same design, omits the incisions. More important, however, are the differences in the stance, armor, and garments of the warriors, because it is the composition of the warrior scene that, more than any other part of the decoration, makes the two vases look alike. The general similarity is obvious; in detail all the figures except the body of Patroklos are very different. One striking dissimilarity is shown by the new fragment from the center of the scene. The two shields of the protagonists are turned so that their rear, concave sides face each other. On the Pharsalos krater all the combatants present the outside, convex side of their shields

toward their opponents (Pl. 51, b, c). There the shield of the Greek protagonist overlaps that of Hektor, as seen in the picture, and the other four warriors all hold their shields in proper defensive position so as to be seen almost in profile. Similarly, as we have already observed, the master of the North Slope krater varied the position of the spears in order to avoid too rigid symmetry. On the Pharsalos vase all six warriors hold their right arms in almost identical pose (Pl. 51, b). This results in a harsh symmetry which is equally apparent in the chariot scene on the other side. The master of the North Slope krater has departed from a realistic rendering of the battle scene in order to obtain a better picture; the painter of the Pharsalos vase has sacrificed the principles of composition for accuracy in depicting the combat.

The differences that emerge from a close scrutiny of the scenes might be interpreted as evidence that the two kraters were painted by different masters; doubtless they could also be invoked as proof of the opposite view. Among the vases attributed to Exekias there are considerable stylistic differences, which cannot all be explained on the basis of a gradual development and ripening of his art. His influence can be traced on a large number of vases, which probably did not all come from the same workshop. Some of his followers came very close to the master's own style.

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A WELL OF THE "CORINTHIAN" PERIOD FOUND IN CORINTH

(PLATES 52-60)

THIS paper¹ presents the contents of a well found in the excavations at Corinth in 1953. It was located in the southwest of the Corinthian Agora within the area of the later "Tavern of Aphrodite" and just north of the line of the still later South Stoa. No architectural remains were immediately associated with it, but it lay within the walls of an enclosure of the late sixth century B.C. The well was probably dug during the construction of this open precinct and immediately filled in when the well-diggers failed to find water. It was noted in *Hesperia*, XXII, 1953, pp. 135-136; on the plan, *ibid.*, p. 132, it is the well that cuts the grave.²

The pottery which was dumped in to fill the shaft, probably household rubbish collected from the vicinity, covers a period from about 600 to 540 B.C., but the bulk of the material is of the late first and second quarter of the sixth century B.C. Though the sixth-century products of the Corinthian Kerameikos are well known from sites all over the Mediterranean, there is a gap in this period in the published pottery from its home. The Middle and Late Corinthian groups (*ca.* 600 to 550 B.C.) published in *Corinth*, VII, i³ are very incomplete, especially in regard to the cheaper fine ware. One other large published group (M. T. Campbell, "A Well of the Black-Figured Period at Corinth," *Hesperia*, VII, 1938, pp. 557 ff.) dates after the end of the Corinthian period when Attic pottery was in undisputed possession of the market. Other groups are only partially published. The present well group makes a beginning toward filling the gap in the first half of the century.

THE FINE WARE

Little needs to be said of the few pots and scraps of pots which represent the declining Corinthian animal style (1-2, 8, 14, 17-21; Pls. 52, 54), for painter lists and complementary characterizations of which I refer to Payne and Benson.⁴ The fragmentary broad-bottomed oinochoe, 2, of jaunty Middle Corinthian style and the

¹ I am indebted to Professor John L. Caskey for doing all the photography and to Mrs. Richard Stillwell for introducing me to the unpublished pottery from the Potters' Quarter at Corinth. I am grateful to Professor Charles H. Morgan for permission to publish this well group and for several valuable suggestions.

² The well is entered in Corinth notebook no. 205, "well at TU: 2." It was 5.15 m. deep; from 0.80 m. it was cut into bedrock and had at that point a diameter of 0.85 m. which narrowed rapidly. Sherds from the top and the bottom of the filling joined.

³ For abbreviations see p. 354, note 15.

⁴ *NC*, p. 66 and Catalogue, pp. 302 ff.; Benson, pp. 38 ff., 66.

"silhouette" style kotyle, **21**, of rather unusual two-zone design are the only pieces of interest. The rest of the ornamented pottery, mostly aryballoi (**10-13**, Pl. 53) is routine.

The "conventionalizing" style, the geometric style in fashion after the mid-century (Late Corinthian II),⁵ is represented by only one pyxis lid (**49**, Pl. 53) with characteristic zigzag decoration, and it is partly for this reason that the well group is here dated somewhat earlier than was suggested in the preliminary publication.

The plain pottery precedes that of the "Black-Figured" well in development, while the earlier pieces fit in with Early and Middle Corinthian material in *Corinth*, VII, i, and the single pots are dated accordingly.

Among the black-glazed ware the kotylai are best represented (**22-30**, Pls. 54, 55). This Middle Corinthian and Late Corinthian type is a degenerate form of Early Corinthian. The rays at the bottom have now become mere shading, sometimes oblique to the base and curved. A tell-tale sign of mass production is the pared disk foot (**24**, Fig. 2) which takes the place of the Early Corinthian ring foot (**22**, Pl. 54).⁶ Misfiring due to stacking is the rule. In some examples the polychrome banding, which is a feature of the Early Corinthian kotyle, is lacking. The type continues through the sixth century, but in the third quarter there appears a variant in which the glaze has receded to half height and the long rays are thinned out.⁷ The older type is taken over into Attic black-glaze where it has a long subsequent life. One kotyle imitates the "Attic" all-glazed type which also occurs in the group (**30** and **87**, Pl. 55); a comparison of the sodden moulding of the Corinthian with the crisp one of the Attic makes clear the details of the newly achieved Attic superiority in pot production; so also a comparison of the Corinthian imitation of an Attic kylix with its Attic model (**34** and **86**, Fig. 2), and of the Corinthian cups, **31-33** with the Attic, **78-79** (Pls. 54 and 60).

Bowls (**37-41**) continue to have metallic features; the wishbone-handled cups or bowls (**35-36**, Pl. 56) are from a metal prototype.

Late Corinthian has an elegant side, signs of which are visible in the minor ware, for example in a finely made black-polychrome oinochoe (**4**, Pl. 52) and in an aryballos (**15**, Pl. 53) of burnished, ivory-colored clay.

The miniatures which come into vogue in the sixth century are mostly faithful copies of the standard shapes, made for use as cheap votives.⁸ They add to the monotony which characterizes the Corinthian pottery of the period. Almost all the

⁵ See Payne, *NC*, p. 331. The animal style does, however, survive. See a Corinthian well group of the third quarter of the sixth century, *Hesperia*, XVI, 1947, pp. 237-238, pl. LV.

⁶ This device has been noticed in other fabrics; see *B.S.A.*, XLV, 1950, p. 291, note 74.

⁷ *Hesperia*, VII, 1935, p. 589.

⁸ A large number of miniatures will be published with the material from the Corinthian Potters' Quarter.

shapes and schemes are routine and standard. Fine black glaze hardly exists, and the fabric is weak. The general impression is one of slipshod facility geared to high speed production.

THE "ARGIVE MONOCHROME" WARE

Some oinochoai (56-57, Pl. 57) of a fine smooth yellowish-buff clay belong to a wide-spread handmade fabric called "Argive Monochrome" because it is most frequent at Argive sites. This well contained a large amount of uncatalogued fragments of similar oinochoai. They copy a current Corinthian black-glaze shape, and two lamps from the fabric are modeled on standard Corinthian types; hence it is clear that Corinth was one of its centers of production.

THE COARSE WARE

Corinth and the Argolis produced a special class of thick and heavy pottery which had no counterpart in Athens and which was desirable enough to be imported by Athens from the eighth century B.C. on. The color of the clay is now buff, now green; light pastel shades are predominant, indicating low firing. The fabric is coarse and rough with large impurities which act as binders, but often there is a smooth surfacing over the outside. The pottery is always handmade, with the aid of a paring knife. The various shapes are simply and solidly composed of geometric figures: spheres and hemispheres, cylinders and ovals. The larger shapes from this well (Pl. 58) are a wine amphora (59), a mixing bowl (60), a tub (61), a mortar (64), and a kalathos (63). There is also a variety of small shapes, mostly bowls, both high and low (68 a-g, Pl. 57) and a lamp (72, Pl. 59); some of these were copied from the fine ware.

The fabric must have had excellent plastic properties, for it is the medium of the stamped reliefs and mouldings which are a Corinthian specialty (67 a-c, Pl. 57). The fragments of moulded rims (66 a-c, Fig. 5; 67 c) probably belonged to wide lustral basins on stands called *perirrhateria*.

THE IMPORTED POTTERY

Chios is represented by fragments (Pl. 57) of wine amphorae (100-101) and the stem of a cup or bowl (99). East Greek fabrics are further represented by several fragments (Pl. 60) of Ionian cups (98) and skyphos fragments (95-97). There is a Rhodian plastic vase (102, Pl. 60) and, not surely identified, a fragment of a wine amphora (104, Fig. 5).

This evidence of import from the eastern Aegean which seems to be more than merely occasional⁹ is of interest in the light of the sudden decline of Corinthian export

⁹ There is more from the Potters' Quarter, from Perachora (Payne, *Perachora*, p. 249), and also in *Corinth* VII, i, no. 379.

to that region after the early first quarter of the century. This has been explained as the result of a restraint on Corinth's trade by a hostile sea power, namely Samos, and as by no means the result of a decline in the demand for Corinthian products.¹⁰ If, however, Corinth was at this time an importer of wares from within the sea empire of Samos, there is more reason to think that she lost her market peacefully—to Athens, else she would hardly have continued to do business with her enemy.

The largest proportion of the imports is Attic (78-93, Pls. 59, 60), some of it quite second-rate,¹¹ largely of the second and early third quarters of the sixth century. There are many fragments of all kinds of Attic cups (78-86); of special interest are the Attic adaptations of Ionian cups (78-79) of the second quarter which indicate that Athens was the manufacturer of a type which has been considered an East Greek possession.¹² Attic lamps (89-93) were in the majority and included all the wheel-made and glazed ones in the group. There is one fragment of an Attic oil jar (88).

About one-seventh of the total pottery was Attic, a heavy proportion in a group of cheap goods, paralleled in another, partly published group of this date.¹³ Benson has suggested that the Corinthian pottery trade, at least as far as figured vases were concerned, had already yielded to the Attic in the second quarter of the sixth century.¹⁴ The finds from Corinth show this to be so, even in regard to cheaper pottery and, most conclusively, in regard to home consumption.

The volume and quality of the Corinthian pottery of the first two-thirds of the sixth century are worthy of attention because the turning point of Corinth's fortune falls somewhere in the middle of that span. The corpus of the figured pottery of Corinth has been called upon to answer various historical questions concerning the economic policies of the Kypselid tyranny, the date of its fall, and the associated decline of Corinth as a commercial power. The details noted in the Catalogue serve to make distinct the way of decline of Corinth's pottery industry; almost every one of the pots examined shows its shoddiness to be due to methods of mass production. It seems, then, quite possible that the potters, working at high speed for a well established market, wrought their own ruin.

¹⁰ H. R. W. Smith, "The Hearst Hydria, An Attic Footnote to Corinthian History," *University of California Publications in Classical Archaeology*, I, 1944, pp. 256-257, 265-266.

¹¹ A quantity of nondescript Attic sherds was not catalogued.

¹² Numerous cups of this type, clearly of Attic manufacture, occurred in a well group found in the Athenian Agora and dated in the second quarter of the sixth century. See *Hesperia*, XXV, 1956, p. 59, pl. 18, e.

¹³ *Hesperia*, XX, 1951, p. 294, also from the South Stoa area, eastern end.

¹⁴ See Benson's chapter on "Die korinthische und die attische keramische Industrie," pp. 107-108.

CATALOGUE ¹⁵

CORINTHIAN POTTERY

1. Fragment of krater. Pl. 52.

C-53-175. Max. dim. 0.108 m.

From lower part of panel. Incised paw to left; animal's muzzle and eye to right.

Dull black glaze inside and out. Bands of applied purple below panel outside. Mottled brownish wash over clay ground.

See Payne, *NC*, pp. 328 ff. From an animal frieze like *ibid.*, pl. 36, no. 4.

Late Corinthian.

0.19 m. Neck, handle and parts of body base missing.

Low wide neck. From bottom up: Short close rays. Two bands enclosing two narrow lines. Animal zone with goat, lion, eared bird, palmette; solid and fan rosettes in field. Two bands enclosing two-tiered checker band. Another animal zone, with panthers and siren. Neck glazed on to shoulder; white dot rosette on neck and on beginning of sharply offset trefoil mouth.

2. Broad-bottomed oinochoe. Fig. 1, Pl. 52.

C-53-178. P. H. 0.155 m.; diam. at base,

Purple on wings, chests, bellies. Liberal, careless incision. Dull, brown glaze, much worn in places. Back fragment burned after breakage.

¹⁵ The numbers which appear under the catalogue heading are the Corinth inventory numbers for 1953. Unpublished pottery from the Potters' Quarter is referred to by inventory number. The following abbreviations are used:

diam.: diameter

est. diam.: estimated diameter

H.: height

L.: length

max. dim.: maximum dimension

P. H.: preserved height

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XII: G. R. Davidson, *The Minor Objects*, Princeton, 1952.

XV, ii: A. N. Stillwell, *The Potters' Quarter, The Terracottas*, Princeton, 1952.

C.V.A.: *Corpus Vasorum Antiquorum*.

Délos: *Exploration archéologique de Délos faite par l'École française d'Athènes*. Cited by volume number:

X: C. Dugas, *Les Vases de l'Héraion*, Paris, 1928.

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Payne, *Perachora*: H. Payne and others, *The Sanctuary of Hera Akraia and Limenia*, Oxford, 1940.

Bibliography for this group in *C.V.A.*, Heidelberg 1, pl. 15, nos. 1 and 2 and pp. 28-29; post-Payne lists: *B.S.A.*, XLIV, 1949, pp. 238-239; Benson, pp. 46 ff., *passim*.

3. Fragment of oinochoe: silhouette style. Pl. 52.

C-53-184. Max. dim. 0.112 m. Shoulder piece, preserving part of flat neck ring.



FIG. 1. Middle Corinthian Oinochoe, No. 2. Scale 1:1.

Breezy, low style, must be fairly late. The sphinx with bulbous nose and the eared bird are distinctive.

Middle Corinthian.

Two animal zones, silhouette style, separated by checker zone between bands. Goats, lions; dots and splotches in field.

Worn black glaze.

See Hopper in *B.S.A.*, XLIV, 1949, p. 188, for the silhouette group with "hailstone" filling. Cf. *Délos* X, pl. 25, which "might well be of Middle Corinthian period" (Hopper).

Probably Middle Corinthian.

4. Trefoil oinochoe. Pl. 52.

C-53-196. P. H. 0.20 m.; greatest diam. 0.215 m. Neck and handle missing.

Ring foot, high shoulder.

Short rays at bottom. Upper body glazed. Shortly above rays purple band on clay ground edged with white lines. Midway up purple lines enclose white line. On shoulder, divisions of double incised lines. Tongues painted in these in a pattern of two white, a blank, two purple. Below, two purple lines with two white lines on each side. Black glaze.

Payne (*NC*, pp. 298, 314, 325) lists examples of the Corinthian oinochoe with trefoil mouth and small foot, but only one or two late ones. Compare with ours *Corinth*, VII, i, no. 371, which corresponds to Payne, *NC*, p. 33, fig. 10 H, the Late Corinthian shape. Another was found with a Little-Master cup in Tomb CIX of the North Cemetery at Corinth (*Art and Archaeology*, XXIX, 1930, p. 261, fig. 18). Two other similar fragmentary polychrome oinochoai (C-53-194 and C-53-182) were also found in the present well. The first preserves the narrow neck with the trefoil mouth. Payne's series in which the broad foot and the slender neck stand last is thus confirmed.

Second quarter of the sixth century.

5. Fragmentary closed vase. Pl. 52.

C-53-191. Diam. at base 0.105 m.

Foot fragment and several non-joining upper fragments. Flaring ring foot. Body banded; broad bands of dull black glaze alternating with narrow purple bands.

Broad and narrow banding and purple on clay ground is characteristic of the "conventionalizing" style. Cf. *A.J.A.*, XXXV, 1931, pp. 17-18, fig. 17, for later oinochoe type, so banded.

Here the system is applied to what appears to be the standard earlier narrow-footed shape.

Middle of the sixth century.

6. Trefoil oinochoe. Pl. 58.

C-53-181. P. H. 0.19 m.; greatest diam. 0.155 m. Base missing.

Short, wide neck, trefoil rim rolled inward. Rolled arched handle attached at rim with a semi-circular flange facing inward. Seems to have been covered with glaze, now almost worn away.

This oinochoe type is current in Athens in the sixth century and the closest parallel to it in Corinth is an Attic import: *Hesperia*, VII, 1938, p. 596, no. 153, fig. 21. Early examples occur in Corinth but are "unusual" (*Hesperia*, XVII, 1948, p. 210, C 7, pl. 75; also *Corinth*, VII, i, no. 166).

First half of the sixth century.

7. Round-mouthed olpe. Pl. 52.

C-53-179. H. 0.077 m.

Tall body; concave bevelling above plain base. Flat bands made by paring knife around body. Short handle attached at rim. Covered with black glaze, worn.

Small vases of this type are current in Athens in the sixth century, cf. *Hesperia*, VII, 1938, p. 388, no. 19, fig. 29.

8. Fragment of closed vase. Pl. 52.

C-53-223. Max. dim. 0.047 m. Wall fragment.

Duck and goat facing. Solid rosettes and dots. Purple and incision.

Middle or Late Corinthian.

9. Fragment of closed vase (?). Pl. 54.

C-53-180. Max. dim. 0.102 m. Shoulder fragment of heavy closed pot.

Tongues above. Helmeted warrior wielding a spear "over-thrust" fashion. Sword sheath at bottom; to right, a shield (?).

From a Late Corinthian battle scene, cf. Payne, *NC*, pls. 38-41, *passim*.

10. Fragmentary aryballos. Pl. 53.

C-53-199. Max. dim. 0.06 m. Lower body fragment.

Three marching hoplites covered with large shields with an incised circle and purple centers. Heads missing. Back blank, bottom banded. Black glaze.

For this numerous class see Payne, *NC*, p. 320, B.

This example is careless Late Corinthian.

11. Aryballos. Pl. 53.

C-53-201. P. H. 0.052 m. Neck missing.

"Lotus and palmette" type. Red glaze.

Like Payne, *NC*, p. 151, fig. 57A, but lying on the side with elongated blossoms. Purple added about as there shown, but dots on tendrils, and lotus tips covered.

Middle or Late Corinthian I.

12. Aryballos. Pl. 53.

C-53-200. H. 0.059 m.

"Quatrefoil" type. On mouth, petals. Very worn.

For the pattern see Payne, *NC*, p. 147, fig. 54 E; for the type, *ibid.*, p. 320, E.

Another aryballos with petals was found beside grave CXXXIX in the North Cemetery (*A.J.A.*, XXXIII, 1929, p. 543, fig. 21).

Middle Corinthian.

13. Aryballos. Pl. 53.

C-53-197. Max. dim. 0.095 m. Lower body fragment. Larger "quatrefoil" type. Very worn.

Cf. Payne, *NC*, p. 320 and fig. 161.

Late Corinthian.

14. Fragment of flat-bottomed aryballos. Pl. 52.

C-53-185. P. H. 0.084 m. Ring foot.

Banded above foot. Hind part of feline. Solid rosettes. Incision and purple. Glaze almost worn off.

See Payne, *NC*, p. 304, B.

Middle Corinthian.

15. Aryballos: White Style. Pl. 53.

C-53-198. P. H. 0.051 m. Rim, handle missing.

Globular shape with flattened shoulder and rounded ring foot. Glaze circles above foot, on standing surface, and on underside. Purple band bordered by fine glaze lines just below shoulder. Burnished, cream-colored thin fabric.

A similar aryballos is in the Castellani Collection (Paolino Mingazzini, *Vasi della Collezione Castellani*, Rome, 1930, pl. 23, nos. 5-7 and p. 120, no. 344). It shows that the missing mouth of our example is probably to be restored with a sharp, elegant flare. The Castellani aryballos is highly praised for its technique: "Terra di bellissimo colore giallo . . . la mirabile sobrieta della decorazione . . .", and indeed, the ivory hue of its clay and the delicacy of its fabric make the Corinth aryballos the most successful vase in the group.

Little light pots with a like system of sparse banding occur in Italic and East Greek wares; see F. P. Johnson, *The Farwell Collection*, Cambridge, Massachusetts, 1953, figs. 16, 18, 20 et al. and p. 64.

The shape is Middle or Late Corinthian. The style belongs mainly in Late Corinthian (*Corinth*, VII, i, p. 83) but some pieces may be earlier. For a White Style vase in a Middle Corinthian context, cf. *A.J.A.*, XXXIII, 1929, p. 541, fig. 21, from the North Cemetery.

Middle or Late Corinthian.

16. Fragment of kotyle: White Style. Pl. 53.

C-53-146. Max. dim. 0.12 m. Part of body with handle and rim.

Purple band at rim and below handle. Inside glazed black. Burnished, cream-colored clay.

Another White Style kotyle (KP 15) comes from a Middle Corinthian context in the Potters' Quarter. These nearly undecorated pots display the "White Style" as a new technique rather than a style.

Middle Corinthian, but late.

17. Fragment of kotyle. Pl. 54.

C-53-145. Max. dim. 0.114 m. Rim and wall fragment.

In handle zone, vertical wavy lines. Below, elongated panther and blotchy rosettes.

Purple on breast and belly, incision. Black glaze.

From a Middle Corinthian kotyle as described in Payne, *NC*, p. 308, A. Others from Corinth: *A.J.A.*, XXXV, 1931, pp. 12-14, figs. 7-9; Benson, p. 37, no. 57 (Gruppe des polychromen Skyphos).

Middle Corinthian.

18. Fragment of kotyle. Pl. 54.

C-53-189. Max. dim. 0.069 m. Wall piece.

Banding below. Animal zone, silhouette style, enclosed by purple bands. Dots and dotted rings in field.

Compare three similar kotylai found in a well mostly of the second quarter of the sixth century: *Hesperia*, XX, 1951, p. 295, pl. 91 b. Banded bases appear in this quarter (though earlier on small kotylai, cf. **20**). Other evidence to this effect comes from the Potter's Quarter.

Second quarter of the sixth century.

19. Rim fragments of kotyle. Pl. 54.

C-53-167. Max. dim. a) 0.027 m.; b) 0.017 m. Non-joining.

a) Wing and back of sphinx's head.

b) Head facing left. Purple on face, head band and wings. Fine incision. Black glaze.

From a kotyle of the Samos group which figures sphinxes, Payne, *NC*, p. 309, pl. 33, no. 1, Middle Corinthian ca. 580 B.C. (dated somewhat later by Benson, p. 86).

Middle Corinthian.

20. Fragmentary kotyle. Pl. 54.

C-53-144. H. 0.05 m. Handles and part of body missing. Disk foot as in **24**.

Vertical wavy lines in handle zone. "Running dog" on body; banded above and below.

Compare Payne, *Perachora*, pl. 33, no. 2,

from a deposit containing only a few things later than Early Corinthian (*ibid.*, p. 99). The type is said by Payne (*NC*, p. 279) not to last into the sixth century, but Hopper (*B.S.A.*, XLIV, 1949, p. 186) cites one Middle Corinthian example from Selinus.

21. Kotyle: silhouette style. Pl. 54.

C-53-137. H. 0.114 m.; diam. 0.157 m. *Hesperia*, XXII, 1953, p. 135, pl. 46, a, no. 2.

Foot like **24**. Rim drawn in slightly. In handle zone, vertical wavy lines. At base, short rays. Two animal zones, enclosed by two lines above, three below and separated by two. Elongated animals in silhouette barely recognizable: rams, felines, etc. Field full of dots and splotches. On base, banding as on **18**.

Inside glazed. Dull black and rusty glaze.

The silhouette style has been treated by Hopper (*B.S.A.*, XLIV, 1949, Appendix, pp. 185 ff.). This kotyle belongs to his "straggling" form which preserves some connection with the animal frieze. The closest parallel is an oinochoe from Rhodes (*C.V.A.*, Rodi 1, 111 c, pl. 1, no. 3), dated to the first quarter of the sixth century. The ordinary Middle Corinthian silhouette style kotylai listed by Payne, *NC*, p. 309, fig. 150, do not have double friezes. The "straggling" style occurs frequently on larger vases and this will account both for the double frieze and the wide rays of our kotyle. The shape is wide, as in Payne's group.

Middle Corinthian.

22. Kotyle. Pl. 54.

C-53-141. H. 0.128 m.; diam. 0.185 m. One half missing.

Ring foot, rim slightly drawn in. Rays at base, glazed above. Groups of alternating red and white lines above rays and below handles. White line inside and outside rim. Glazed and worn inside.

Compare *Hesperia*, XVII, 1948, pp. 222-223, D 6, from an Early Corinthian group, one of many. This one has a wider flare.

Probably of the early sixth century.

23. Kotyle. Pl. 55.

C-53-143. Est. diam. 0.106 m. Part with rim and handle.

Vertical lines at bottom; glazed above and inside. Above lines and below handles, purple lines, edged by white. White line outside and inside rim. Dull glaze.

Compare *C.V.A.*, Louvre 8, pl. 27, nos. 1 and 5, called Middle Corinthian by Hopper (*B.S.A.*, XLIV, 1949, p. 219); *Corinth*, VII, i, no. 342.

Like **22**, but shading instead of rays, therefore certainly of the first quarter of the sixth century.

24. Kotyle. Figs. 2, 3, Pl. 55.

C-53-136. H. 0.094 m.; diam. 0.135 m.

Hesperia, XXII, 1953, p. 135, pl. 46, a, no. 1.

Disk foot. The ring of the foot was bevelled underneath in such a way as to reduce the standing surface and produce a central disk, Fig. 2. The sloping surface has a glaze line at the edge and a broad purple band inside. On the disk, a glaze band outside, and thinner concentric circles inside. At bottom, short lines, slightly curved and oblique. Upper part glazed. Two purple lines below handles, above rays, and on foot. Inside glaze very worn.

Left of center a graffito: $\pi\iota\epsilon$, drink!

This legend recurs on Little-Master cups, usually in a longer, more gracious form (Kretschmer, p. 195; Beazley, *Development*, p. 54), whence the Corinthian may have taken the idea, except that the Attic form is always $\pi\iota\epsilon\iota$, a non-literary form (for the Attic form see Kretschmer, *op. cit.*, p. 196; for the value of the Corinthian closed *epsilon*, Payne, *NC*, p. 158). This is the most heavily worn of all the cups in the well.

See Payne (*NC*, pp. 309-310, fig. 151) where this type, characterized by the loss of white and red polychromy and by the debasement of the rays into shading, is said to begin probably in the first quarter of the sixth century; this is confirmed by Attic imitations found in a group of the early sixth century (with the "Dædalus" neck, *Hesperia*, XV, 1946, p. 125, no.

6). The low craftsmanship of the whole lot, however, puts this and the following kotylai into the second quarter of the sixth century. Compare: *Hesperia*, XX, 1951, pl. 91 c, right, and p. 295 (from a well group of the second quarter); *C.V.A.*, Oxford 2, pl. 4, no. 1 and p. 67, probably about the second quarter; *Corinth*, VII, i, nos. 343-353. This group of kotylai regularly has a foot with slanting standing surface and a disk (Fig. 2) which distinguishes them from the earlier ring-footed polychrome kotyle like **22**. Their feet also have distinctive markings, illustrated in *Hesperia*, VII, 1938, p. 590, fig. 16, nos. 89, 96. In addition, see *C.V.A.*, Reading 2, pl. 2, nos. 12-13. The type is much copied in Athens, see above and *Hesperia*, XV, 1946, pl. LXIII, nos. 243-245.

Second quarter of the sixth century.

25. Kotyle. Pl. 55.

C-53-135. H. 0.095 m.; diam. 0.135 m.

Like **24**, but no purple on underside of foot.

26. Kotyle. Pl. 55.

C-53-139. H. 0.10 m.; diam. 0.135 m. Handle missing.

Like **24**, but no purple at all.

27. Kotyle. Pl. 55.

C-53-138. H. 0.12 m.; diam. 0.152 m. Handle missing.

Like **24**, but larger. Misfired above handles.

28. Kotyle. Pl. 55.

C-53-140. H. 0.073 m.; diam. 0.10 m. Handle missing.

Like **24**, but smaller.

29. Kotyle. Pl. 55.

C-53-142. H. 0.068 m.; diam. 0.114 m.

Decoration like **24**, but the shape is lower and broader, probably the latest.

30. Kotyle: black glaze. Pl. 55.

C-53-148. Diam. at base 0.077 m. Torus base and part of straight-sided body.

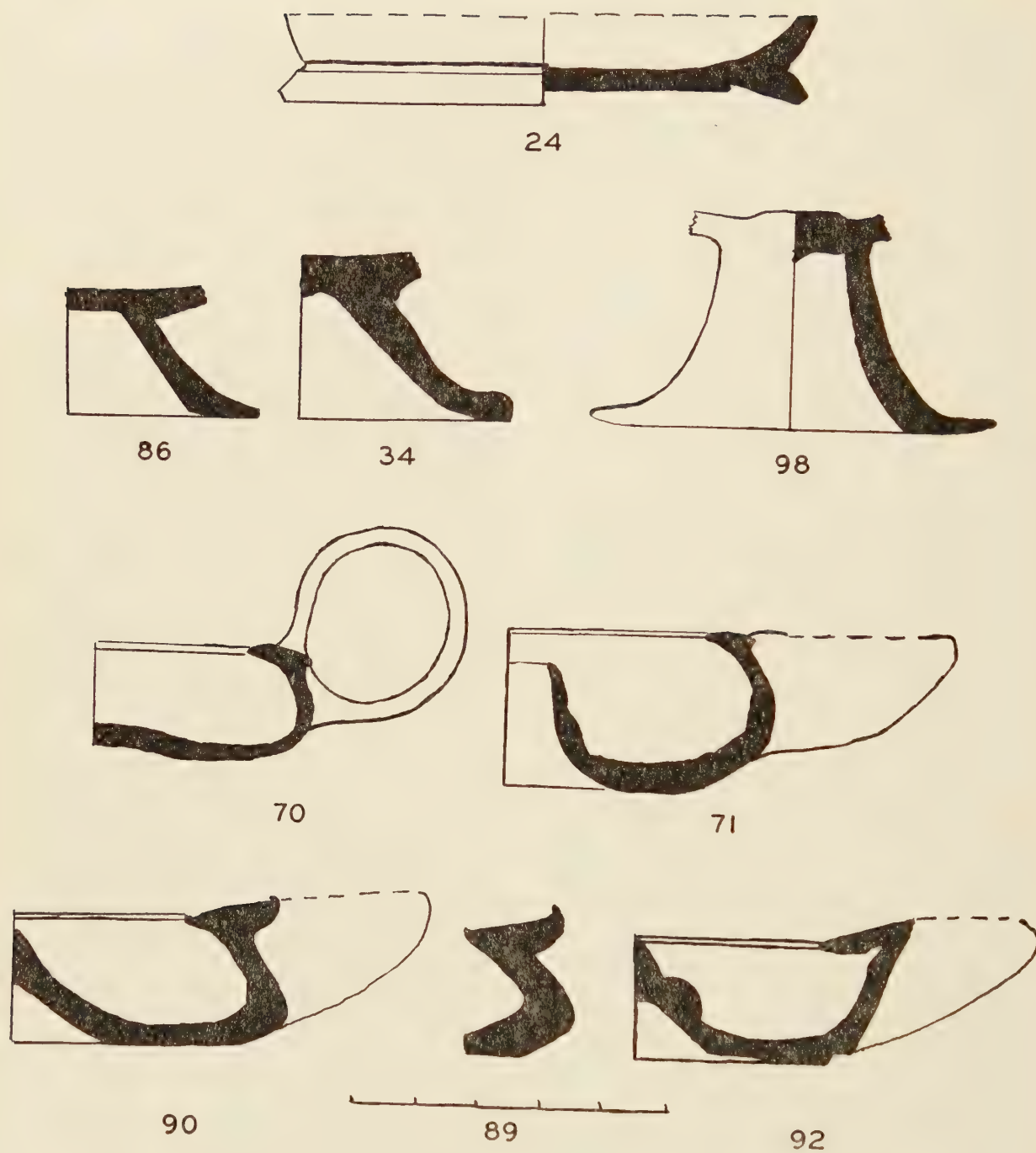


FIG. 2. Profiles of Bases of Vases and of Lamps. Scale 1:1.

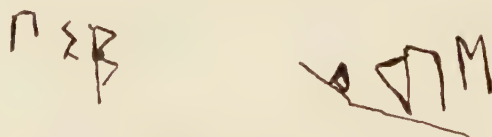


FIG. 3. Graffiti on Nos. 24 and 38.

Glazed black all over; purple and glaze banding beneath foot.

A Corinthian imitation of the "Attic" kotyle. Compare the Attic import 87. Another all glazed Corinthian example from a well group of the second quarter of the sixth century is *Hesperia*, XX, 1951, pl. 91 d, left, but that one has the older Corinthian flaring ring foot rather than a torus moulding. The same well contained an Attic kotyle of this type.

Second quarter of the sixth century.

31. Skyphos. Pl. 54.

C-53-160. Est. diam. 0.112 m. Handle and rim fragment.

Upright rim, slightly rounded shoulder. Outside glazed to below handle. Glaze line above handles and at rim. Inside glazed; reserved line at rim; broad bands of applied purple. Brown-black glaze.

A Corinthian imitation of the Attic ST cup, see 78. The Corinthian rim is less clearly tooled off. Other Corinthian imitations will appear in the second volume of *Perachora*.

Late first or second quarter of the sixth century.

32. Skyphos. Pl. 54.

C-53-155. Est. diam. 0.10 m. Handle and rim fragment.

Like 31. Glaze all worn off.

33. Skyphos. Pl. 54.

C-53-156. H. 0.056 m.; diam. 0.11 m. Handles broken off.

Upright rim and rounded shoulder. Ring foot. Glazed inside and out; unglazed patch above foot. Black glaze.

The profile is like 31, but the glaze was applied by dipping, a trick later used for cups (*Hesperia*, VI, 1937, p. 294, nos. 154-162, fig. 24).

Second quarter of the sixth century.

34. Foot of a low-stemmed cup. Fig. 2.

C-53-225. H. 0.035 m.

Thick torus standing base. Glazed all over with black glaze except for standing surface.

Compare the Attic foot, 86.

35. Bowl: wishbone handles. Pl. 56.

C-53-157. H. 0.041 m.; diam. 0.095 m.

Open bowl with ring foot. Flattened rim. Glazed inside and out. Red to black glaze.

The bowl itself is the same type as 37. The flattened rim prevents this vase, though it has handles, from being a drinking cup and also gives it a metallic look. The wishbone handles further prove metallic origin. Numerous bronze handles of the kind are shown or cited by Dunbabin in Payne, *Perachora*, pp. 164-165, pl. 67, nos. 1, 4, 8 and 9; especially dozens in *Ἀρχαιολογικὸν Δελτίον* I, 1915, Parartema, pp. 20-22, figs. 1-7. Some of these may have belonged to shallow bowls. (The wishbone handles are copied by Attic ceramic cups; the first have Corinthianizing decoration. Payne, *Perachora*, p. 165; *Ath. Mitt.*, LIX, 1935, pp. 5 ff. See also E. Vanderpool in *Hesperia*, XV, 1946, p. 308, under no. 184; Beazley, *Development*, pp. 23 and 108, note 53).

A White Style bowl or cup, footless and with wishbone handles comes from the Potters' Quarter (KP 15).

First half of the sixth century.

36. Bowl: wishbone handles. Pl. 56.

C-53-154. H. 0.039 m.; est. diam. 0.10 m. Half missing.

Like 35, but lower and wider with a plain rim. Glaze all worn off.

Perhaps to be thought of as a cup.

First half of the sixth century.

37. Fragment of bowl. Pl. 56.

C-53-212. H. 0.042 m.; diam. 0.105 m. Half preserved.

Shape like 35, but handleless. Glazed inside and out. Black glaze.

Similar small bowls: *Hesperia*, VII, 1938, p. 587, nos. 82-83, fig. 15.

First half of the sixth century.

38. Fragment of bowl: graffito. Fig. 3, Pl. 56.

C-53-211. H. 0.03 m.; est. diam. 0.09 m.

Like **37**, but foot glazed beneath. Warped.

The letter after the *sigma* seems to be a Corinthian *beta* with the two last strokes awry: $\sigma\beta\epsilon$, retrograde.

First half of the sixth century.

handles with pointed return ends, applied at rim. Worn glaze inside and out. Banding of purple lines, edges with white. Bottom solid purple. Foot has concentric circles beneath.

This type of bowl appears in Early Corinthian (Payne, *NC*, p. 297, where fragments from Corinth are mentioned). Ours is crisp and metallic and probably early. Later examples (*Hesperia*, VII, 1938, p. 595, no. 144, fig. 18) lose the polychrome decoration.

Early Corinthian.



FIG. 4. No. 39. Scale 1:1:

39. Fragment of a bowl or cup. Fig. 4.

C-53-210. H. 0.05 m.; diam. 0.104 m.

Flaring rim, ring foot. A broad band of clay was applied below rim and set off by a groove, to give a shallow bowl contour inside and a cup-like rim on shoulder outside. Beginning of a handle. Broad banding inside and out. Glaze worn.

The shape prefigures a sophisticated fifth-century cup-kotyle (*Hesperia*, XVIII, 1949, pl. 86, no. 35).

First half of sixth century.

40. Bowl. Pl. 56.

C-53-214. H. 0.05 m.; diam. 0.15 m.

Low, open bowl with ring foot and metallic flattened rim, extending inside and out. Rolled

41. Fragment of bowl. Pl. 56.

C-53-213. Max. dim. 0.08 m. Wall fragment preserves handle attachment.

Shape like **40**, but concave band on outside of rim. Glazed inside with reserved circle at bottom. Top and outside rim purple. On outside, two bands below rim and above foot. Dull glaze.

Middle Corinthian.

42. Fragment of kalathos. Fig. 5.

C-53-219. Max. dim. 0.19 m.

Broad rim, turned outward and thickened. Part of vertical wall. Top and outside of rim glazed. Brown glaze, worn.

An earlier large kalathos, from the Potters' Quarter (KR B 346).

First half of the sixth century.

43. Fragment of kalathos. Pl. 53.

C-53-207. H. 0.042 m.

Broad rim, turned out; cylindrical shape; flat base, bevelled at edge. Glazed all over; worn.

Middle Corinthian.

44. Fragment of kothon. Pl. 53.

C-53-131. Max. dim. 0.089 m.

Shoulder fragment. Outside, bands; inside, tongues facing center. Black glaze, worn.

See *Hesperia*, VII, 1938, p. 594, nos. 135-138, fig. 18.

Late Corinthian.

45. Mesomphalos phiale. Pl. 56.

C-53-209. Diam. 0.083 m.

Low open shape. Blunt cone; impression beneath. Three glaze bands outside. Dots at rim inside; carelessly banded. Broad purple bands on clay at bottom. Brown to black glaze.

Two banded phialai, observed by K. F. Johansen (*Les vases sicyoniens*, Copenhagen, 1923, p. 68) to be Corinthian rather than Protocorinthian, were figured in C. Waldstein and others, *The Argive Heraeum*, Boston and New York, 1902, 1905, II, p. 125, figs. 49-50. Another, also banded, from the Potters' Quarter (KP 2595) is of the last quarter of the seventh century.

Sixth century phialai: Payne, *NC*, p. 312, figured Middle Corinthian examples; Payne, *Perachora*, pp. 148 ff., the large deposit of bronze phialai from the Sacred Pool. There exist numerous small undistinguished clay phialai (e. g. *Délos*, XVIII, B 112-113). Our example belongs among the earliest of these.

Early sixth century.

46. Fragment of bowl. Pl. 56.

C-53-205. Est. diam. 0.123 m.

Plain open shape. Two holes punched at rim. Broad bands inside and out. Reddish glaze.

For small banded Protocorinthian bowls see Johansen, *op. cit.* p. 68, fig. 44. The numerous sixth-century examples differ only in their softer glaze and chalkier clay. Round-bottomed ones regularly have one or two holes at the rim, cf. *B.S.A.*, LVIII, 1953, p. 49, probably for suspension as votives.

First half of the sixth century.

47. Fragment of bowl. Pl. 56.

C-53-206. Est. diam. 0.085 m.

Shape like **46**. Reddish glaze inside and out; much worn.

48. Miniature vases. Pls. 53, 56.

a. Krater.

C-53-173. H. 0.042 m.

Upright rim flaring on top. Handles turned up and applied to rim. Ring foot. Glazed inside and out. Red to black glaze.

The likeness is to the Early Corinthian column krater (*Corinth*, VII, i, no. 233) rather than the taller sixth-century forms.

b. Kantharos.

C-53-172. H. 0.049 m. One band handle missing.

Upper part of body concave. Disk foot. Unglazed. Hand made.

The kantharos is foreign to the Corinthian repertory, but plain miniature votives of this shape are common in Athens, see R. S. Young in *Hesperia*, Supplement II, p. 161. The clay of the present example is Corinthian.

c. Bowl pyxis.

C-53-202. P. H. 0.035 m.

Upright rim. Lug handle. Verticals between bands below handle. Glaze worn.

A sixth-century shape, cf. Payne, *NC*, p. 307.

d. Tripod pyxis.

C-53-203. Part of bowl and one leg.

Rim fluted on top and glazed. Bands inside and out. Glaze worn.

A miniature of Payne, *Perachora*, pl. 33, no. 17.

e. Kalathos.

C-53-208. H. 0.037 m.

False ring base; flaring sides; rim slopes out. Oblique slits, bounded by grooves. Banded inside and out. Glaze worn.

Cf. Payne, *Perachora*, pl. 33, no. 9.

f. Kotyle.

C-53-150. P. H. 0.036 m. Foot missing.

Verticle lines in handle zone. Below handle, verticals enclosed by bands. Close rays below. Purple on lowest band. Black glaze.

Full scale: *Hesperia*, XVII, 1948, pl. 81, D 44, subgeometric.

g. Kotyle.

C-53-151. P. H. 0.031 m.

Low rounded profile. Disk foot. Vertical lines in handle zone. Below broad band between narrow ones. Glaze much worn.

Another, from the Argive Heraion: *Hesperia*, XXI, 1952, pp. 195-196, no. 197, pl. 53, with references. A similar pot, C-53-147, is not illustrated.

h. Cover.

C-53-204. Max. dim. 0.061 m.

Shallow with vertical sides. Glaze bands outside. Bottom dotted. Black glaze. Belongs to a bowl pyxis like **c**.

49. Pyxis cover. Pl. 53.

C-53-98. Est. diam. 0.082 m. Three non-joining pieces.

Flange beneath. Knob handle. Zigzags filled in with triangles, enclosed by bands. Dull black glaze.

Earliest "conventionalizing" style. For the patterns of this style cf. A. Newhall, "The

Corinthian Kerameikos," *A.J.A.*, XXXV, 1934, pp. 16 ff.

Third quarter of the sixth century.

50. Pyxis cover. Pl. 53.

C-53-96. Diam. 0.055 m. Knob missing.

Like **49**. Banded on top, with some of verticals. Red to black glaze.

Late Corinthian.

51. Pyxis cover. Pl. 53.

C-53-97. Max. dim. 0.062 m.

Like **49**. Conical knob. Banded decoration. Dull black glaze.

First half of the sixth century.

52. Round-mouthed jug. Pl. 58.

C-53-192. Diam. of mouth 0.102 m. Non-joining foot fragment.

High flaring neck with ridge at base; flattened rim. High band handle attached at rim. Ring foot. Purplish glaze on rim; band on lower body and foot. Spiral end of decoration on shoulder, front. Light green clay.

Compare *Hesperia*, VII, 1938, p. 596, nos. 145-149, fig. 18.

These jugs are the descendants of those of the end of the seventh century shown in *Corinth*, VII, i, no. 231 and *Hesperia*, XVII, 1948, p. 217, D 7, pl. 78.

First quarter of the sixth century.

53. Round-mouthed jug. Pl. 58.

C-53-193. Diam. of mouth 0.108 m.

Shape and decoration like **52**, but no spiral; band below shoulder.

54. Round-mouthed jug. Pl. 57.

C-53-186. H. 0.087 m. Handle missing.

Tall cylindrical body. Flaring, sharply offset rim. Band handle; plain base. Thinned glaze bands. Pinkish buff clay.

A closely similar jug comes from the Early Corinthian Well D (*Hesperia*, XVII, 1948, p. 218, D 12, pl. 79). Compare also *Délos*, XVII,

pl. XLVI, no. 16 "of undetermined origin"; J. Sieveking and R. Hackl, *Die Königliche Vasensammlung zu München*, Munich, 1912, Vol. I, p. 48, no. 476, fig. 62, listed as "Ionian"; J. Boehlau, *Aus ionischen und italischen Nekropolen*, Leipzig, 1898, p. 149, pl. VIII, no. 15. A Fikellura olpe of this, clearly East Greek, shape was found in Corinth, *Corinth*, VII, i, no. 379. This jug is either import or imitation, I cannot tell which.

Base of a larger similar jug, C-53-183, not figured.

Perhaps as early as the late seventh century.

55. Round-mouthed jug(?). Pl. 57.

C-53-217. P. H. 0.116 m. Base and handle missing.

High flaring neck. Round body. Band handle attached at neck. Three thinned glaze bands around body, one at base of neck. Wavy line on neck; neck glazed inside. Soapy pink clay with gray core.

The clay does not look like ordinary Corinthian, but this may be in the firing. Compare, however, an imported pot similar to the "pre-Persian" ware at Olynthos, *Hesperia*, XXII, 1953, p. 212, no. 10.

ARGIVE MONOCHROME WARE

56. Oinochoe. Pl. 57.

C-53-93. P. H. 0.065 m. Parts of rim. Handle missing.

Trefoil rim; deep body; flat base, start of double rolled handle. Handmade.

For a full discussion of this fabric see J. L. Caskey, "Investigations at the Heraion at Argos, 1949," *Hesperia*, XXI, 1952, pp. 202 ff.

This shape is not found among the large number of monochrome oinochoai from the Argive Heraion (*Hesperia*, XXI, 1952, pp. 202 ff.).

This cylindrical shape represents the sixth-century oinochoe of the fabric; a similar shape is current in the glazed ware (*Hesperia*, VII, 1938, p. 584, nos. 63-68, figs. 11-12). The more

primitive globular shapes also survive into the sixth century. Such a round-mouthed fragment comes from this well (C-55-130) and also *Hesperia*, XX, 1951, p. 89, grave 5, no. 2, pl. 39 a; P. N. Ure, *Aryballoi and Figurines from Rhitsona in Boeotia*, Cambridge, 1934, p. 18.

First half of the sixth century.

57. Oinochoe. Pl. 57.

C-53-128. P. H. 0.064 m.

Trefoil rim and double rolled handle. Goes with a body like **56**.

58. Oinochoe. Pl. 57.

C-53-153. P. H. 0.08 m.

Ridge at flat base and neck junction.

CORINTHIAN COARSE WARE

59. Amphora. Pl. 58.

C-53-222. H. 0.65 m.; greatest diam. 0.46 m.

Cylinder neck with overhanging flat rim. Angular handle, sides flattened on top; joining below rim. Balloon body with pointed base. Light green.

Earlier coarse ware amphora of the ninth and eighth centuries are collected in *Hesperia*, XVII, 1948, p. 212, under C 16. The main features of the wine amphora are already present in these, but they are much smaller and rather clumsily cut off at the bottom. *Corinth*, VII, i, no. 171 is a seventh-century example.

The earliest Corinthian wine jars with pointed bottom published heretofore were of the second half of the sixth century (*Hesperia*, VII, 1938, pp. 605-606, nos. 201-203, fig. 27). The present one, by its context of the first half of the sixth century, has a nearly spherical body and a cylindrical neck, while the later examples bulge in various ways and have narrower, somewhat flaring necks. This amphora is best marked as a transition piece by the foot, which here, as in the earlier ones, forms a continuous line with the body, while later amphorae show a break in the profile.

Fifth and fourth century amphorae of this

series are collected in *Hesperia*, XVII, 1948, p. 233, under E 13.

First half of the sixth century.

60. Mixing Bowl. Pl. 58.

C-53-132. H. 0.165 m.; diam. at rim 0.34 m.

Round open bowl with flat rim and small plain base. Handles below rim. Uneven potting.

Similar bowls exist in the Attic household fabric, but they have spouts.

61. Tub. Pl. 58.

C-53-133. H. 0.12 m.; L. 0.39 m.

Oblong shape; flaring sides. Rim slants upward and out; flattened on top and outside.

Compare *Hesperia*, VII, 1938, p. 600, no. 173, fig. 23. Both Corinthian examples are unglazed. Similar tubs of both earlier and later date come from the Athenian Agora, see *Hesperia*, V, 1936, p. 345, fig. 13.

First half of the sixth century.

62. Fragments of an amphora (?). Pl. 57.

C-53-117. H. of handle 0.04 m.

Flat, overhanging, turned down rim fragment seems to go with broad arched handle.

Perhaps from wide-necked amphora with loop-handles, like *Hesperia*, XVII, 1948, pl. 76, C 17.

63. Kalathos. Pl. 58.

C-53-113. H. 0.134 m.; diam. at rim 0.16 m.

Vertical, slightly rounded sides; plain flat base and rim. The shape recalls a flower pot (D. B. Thompson, "The Garden of Hephaistos," *Hesperia*, VI, 1937, p. 405, fig. 7) but there was no hole.

64. Mortar. Pl. 58.

C-53-115. H. 0.05 m.; diam. at rim 0.235 m.

Sides flare above base. Rim flattened on top, slopes away outside. Grit on inside. Signs of burning after breaking.

Compare *Hesperia*, XVII, 1948, p. 228, D 78-79, pl. 84, seventh century; *Hesperia*, VII,

1938, p. 601, no. 176, fig. 26, sixth century; *Hesperia*, VI, 1937, p. 299, nos. 190-192, fig. 32, fifth century. These occur also at Athens (*Hesperia*, XXII, 1953, p. 98, no. 127, pl. 34).

A fragment of a similar mortar is not illustrated (C-53-108).

First half of the sixth century.

65. Foot of bowl or pithos. Pl. 58.

C-53-119. L. 0.10 m.

Hoof-shaped wedge with lengthwise groove on underside and down center front; on top the curved surface of the bottom of a pot.

Three or more of these wedges probably steadied a large, round-bottomed bowl or pithos.

The moulding of a coarse, large pithos rim, flat on top and rounded on the inside (C-53-118) was also found.

66. Fragments of large coarse ware basins. Fig. 5.

a. C-53-116. Max. dim. 0.14 m.

Flat, slightly swelling rim with ridge on inside. Fluting on vertical outside face.

Perhaps from a basin on a stand, a *perirrhantērion* like those in *Hesperia*, VII, 1938, p. 602, nos. 184-186, fig. 25.

b. C-53-92. Max. dim. 0.13 m.

Flat overhanging rim; outside turned down: fluting on vertical face.

c. C-53-114. Max. dim. 0.107 m.

Overhanging rim of basin. Parts of a flat base not catalogued.

67. Fragments of stamped and moulded coarse ware. Pl. 57.

a. C-53-127. Max. dim. 0.058 m.

Rim fragment (?). Overhanging upper part with deep groove. Below, stamped tongues with raised dots along inside. Whitish surfacing.

This is one of the most frequent motives in stamped ware. The stamp is individual; in origin, metallic. For a discussion, cf. S. Weinberg, "Corinthian Relief Ware,"

Hesperia, XXIII, 1954, pp. 128 ff. This is among the earlier examples.

c. C-53-109. H. 0.084 m.

Applied moulded rim fragment. Astra-



FIG. 5. Profiles of Large Vases.

b. C-53-111. Max. dim. 0.093 m.

Three astragals, one with oblique three-pronged rouletting.

Compare S. Weinberg, *op. cit.*, pls. 28-29.

galos moulding on top and bottom of vertical surface.

Compare Weinberg, *op. cit.*, pl. 28, c.

68. Fragments of small coarse ware shapes. Pl. 57.

- a. C-53-112. Max. dim. 0.075 m.

Low vertical sides with flat rim. From a shallow bowl.

- b. C-53-122. Max. dim. 0.085 m.

Upright rim and high shoulder. From a deep, rounded shape like a bowl-pyxis.

- c. C-53-120. P. H. 0.053 m.

Cylindrical neck fragment. Overhanging rim with a hawksbeak moulding underneath. From a kalathos.

- d. C-53-94. Max. dim. 0.08 m.

Horizontal handle in one piece with rim. From an open deep bowl.

For the whole, cf. *Hesperia*, XVII, 1948, p. 214, C 27, pl. 77, from an eighth-century well.

- e. C-53-177. Max. dim. 0.095 m.

Rim has raised band on outside. One end of a return handle. From an open deep bowl. Light green.

For the whole, cf. *Hesperia*, XVII, 1948, p. 228, D 77, pl. 84, from an Early Corinthian well.

- f. C-53-123. Max. dim. 0.07 m.

Rounded body, part of return handle attached at flattened rim. From open bowl.

- g. C-53-110. Max. dim. 0.09 m. Like a, but much coarser and heavier.

69. Cooking pot. Pl. 58.

C-53-134. P. H. 0.15 m.; greatest diam. 0.20 m. Base and handle missing.

Flattened globular body. Upright rim with flange inside for lid. Band handle attached at rim. Burnt at bottom and sides. Red slightly micaceous clay. Wheelmade.

For micaceous ware in general, best known from Attica and Aigina, see R. S. Young, *Hesperia*, Supplement II, p. 199. It is of interest that this Corinthian counterpart of the "household ware" is wheel thrown rather than handmade. It differs from the Attic of the period in its brick-red color, in its very faint micaceousness and in the greater thinness to which it is turned.

The ordinary round-bottomed cooking pot was, in Corinth as in Athens, handmade; there are, however, in the storerooms of the Corinth Museum, some other pots of Corinthian household ware which are totally or in large part made on the wheel.

In shape the pot is a mixture of the simple spherical type with a strap handle (*Hesperia*, VII, 1938, p. 599, nos. 159-161, fig. 31; some uninventoried fragments in this well) and the squatter casserole with a flanged rim (*Hesperia*, VI, 1937, p. 304, no. 205, fig. 36). For other cooking ware from Corinth compare the sections in the articles cited.

Mid sixth century.

CORINTHIAN LAMPS

70. Lamp: Howland type 10. Fig. 2, Pl. 59.

CL 4008. Diam. 0.071 m.; H. to rim 0.017 m. Nozzle partly missing.

Shallow saucer with indrawn, flattened rim; ridge on outside. Broad, looping band handle, bridged nozzle.

"Monochrome" fabric; burnt at nozzle.

Broneer type I, cf. *Corinth*, IV, ii, pp. 31 ff.; found in the Potters' Quarter in the second half of the seventh and the first half of the sixth centuries (*Corinth*, XV, ii, p. 244). In Athens this type is recorded in the late seventh and early sixth centuries B.C.; see Howland, *Greek Lamps*.

71. Lamp: Howland type 11. Fig. 2, Pl. 59.

CL 4009. Diam. 0.08 m.; H. 0.021 m. Handle missing.

Body same as 70; but a socket in center.

Broneer type I, as under 70. Howland dates this type with type 10 which it closely resembles.

72. Lamp: Howland type 10. Pl. 59.

CL 4010. Diam. 0.081 m.; H. 0.022 m.

Shallow saucer with indrawn, flattened rim. Horizontal handle with return ends. Bridged nozzle.

Coarse ware fabric; burnt at nozzle.

Broneer type I. The employment of coarse ware fabric is remarkable. The return handles are characteristic of that technique.

CORINTHIAN MISCELLANEOUS OBJECTS

73. Fragment of plastic vase. Pl. 59.

C-53-216. Max. dim. 0.036 m.

Dotted rump with swellings for legs and tail. Part of flanks. Dull black glaze.

Probably from a hare as M. I. Maximova, *Les vases plastiques dans l'antiquité*, Paris, 1927, p. 109 and Payne, *NC*, p. 177, fig. 80. The clay is chalky and the dotting careless.

Middle or Late Corinthian.

74. Terracotta plaque. Pl. 59.

MF 9676. Max. dim. a) 0.04 m.; b) 0.05 m.; c) 0.025 m. Three non-joining fragments.

a) and b) preserve a plaque with an area enclosed by a raised ridge. In the area, two concave elongated objects with rolls of clay on them; traces of a third. In front of rim, parts of three figures; one upper body with arm preserved. The plaque was cut behind the figures.

c) Cone with sieve-top, broken off at bottom.

Soft buff clay. This appeared to be a bread-kneading scene (*Hesperia*, XXII, 1953, p. 136) of which there are many in terracotta, cf. *Corinth*, XV, ii, pp. 206-207. But Egyptian and Greek models show that here three women are bending over their grain mills, saddle querns and loaf-shaped grinders. The use of fragment c) is explained by a small terracotta group in Cyprus (Myers and Richter, *Catalogue of the Cyprus Museum*, Oxford, 1899, no. 3145, p. 110, pl. III) which shows one person grinding on the quern while another sits by, holding a sieve to sift the meal. In this case, the sieve probably stood on the ground. The enclosure is a cross between tub and table, such as can be seen in other terracottas (*B.C.H.*, XXIV, 1900, pl. 9).

Such casual sausage-and-pill terracottas are numerous in Corinth (*Corinth*, XV, ii, p. 7, pl. 45; see also an animal leg, MF 9677, Pl.

59). The soft chalky clay puts the fragments near the middle of the sixth century (*ibid.*, p. 6).

Mid sixth century.

75. Loomweights. Fig. 6, Pl. 59.

Ten whole ones were catalogued (MF 9736-9745). The four here figured cover the range of variety.

a. MF 9737. H. 0.064 m.; diam. at base 0.038 m.

Conical with bevelled base. Hole punched near apex. Buff, smooth clay.

Corinthian conical loomweights are discussed in *Corinth*, XII, pp. 148 ff. All the present weights, except **d** approximate profiles IV and V (*ibid.*, p. 149, fig. 23) dated in the late sixth and early fifth centuries respectively. Apparently both may be earlier. Cf. also *Hesperia*, VII, 1938, p. 609, nos. 225-226, fig. 30, sixth century.

b. MF 9745. H. 0.071 m.; diam. at base 0.039 m.

Like **a**; crisper bevelling. Greenish clay.

c. MF 9742. H. 0.077 m.; diam. at base 0.037 m.

Like **a**.

d. MF 9736. H. 0.09 m.; diam. at base 0.062 m.

Like **a**. The biggest and fattest. Its profile resembles IX and X, dated much later, but this is surely fortuitous.

76. Bronze bead. Pl. 59.

MF 9746. L. 0.023 m.

Long oval with hole through the long axis.

Compare *Corinth*, XII, no. 2504, p. 295, pl. 122, whence other parallels.

First half of the sixth century.

77. Bone pins. Pl. 59.

MF 9678. Average L. 0.085 m.

Five long bone splinters. Though unworked, they seem to have been split off for a purpose, perhaps to make pins or needles.

For unfinished bone needles, compare *Corinth*, XII, pp. 173-174, pl. 147 a, though there is no evidence for needles at Corinth before the first century after Christ. Pins: *ibid.*, pp. 276 ff.

ATTIC POTTERY

78. Stemless cup. Pl. 60.

C-53-158. H. 0.069 m.; diam. 0.174 m. Handles broken off. Flaring rim, sharply offset

Attic cups for the coming second volume of *Perachora*. Such cups are usually called Ionian; no doubt this one is Attic, though it shows features of its Ionian model, notably the reserved bands inside (cf. 96).

Shefton distinguishes as largely Attic the later group of ST cups, named after the section of the Athenian Agora wherein a good example was found; a published example and mention of many fragments from the Agora in *Hesperia*,

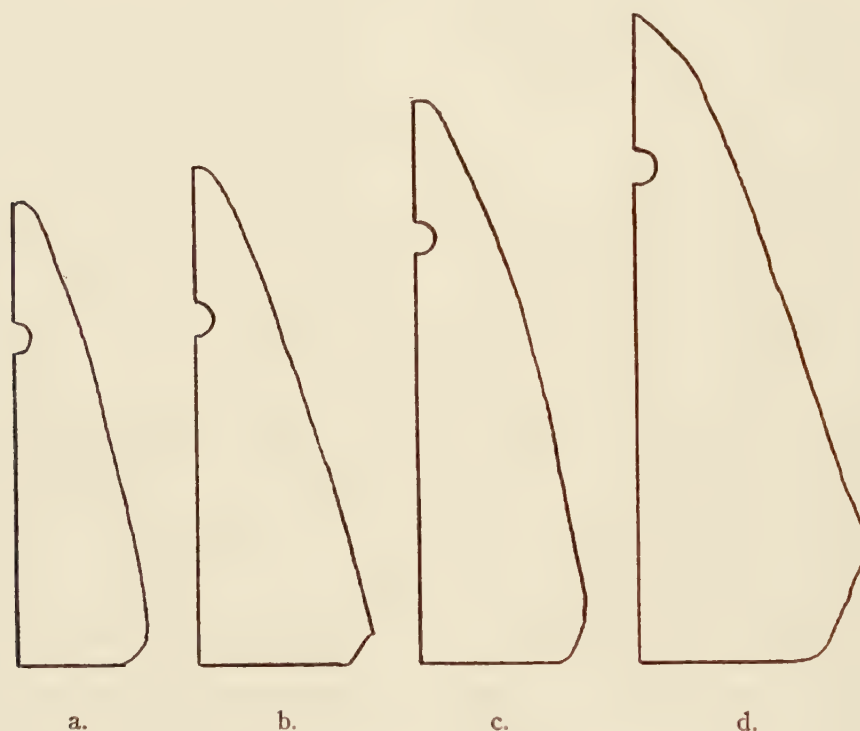


FIG. 6. Profiles of Loomweights, No. 75. Scale slightly under 1:1.

from rounded shoulder. Flaring ring foot. Glazed inside and out. Reserved outside: a narrow line half-way down body, handle zone and rim; inside: line at rim, band in shoulder cavity. Foot has glaze circle on flat surface. Shiny firm black glaze.

Discussions by Payne, *NC*, p. 296; Hopper in *B.S.A.*, XLIV, 1949, pp. 225-226. I have had the use of Mr. Brian Shefton's manuscript on

Supplement IV, p. 13, a, fig. 11; see also *Hesperia*, XXV, 1956, p. 59, pl. 18, e. This group was previously considered Ionian (for a collection of references, see *C.V.A.*, Heidelberg 1, pl. 4, no. 4 and p. 14). The present cup is clearly a very early member, somewhat later than the cups pictured on the Early Corinthian Eurytios krater (Payne, *NC*, pl. 27), and still of the first quarter of the sixth century.

79. Stemless cup. Pl. 60.

C-53-168. Max. dim. of rim piece 0.111 m. Non-joining small fragment.

Crisper contours, higher, more flaring rim, wider shape and more precise glazing than 78. Inside all glazed. Black glaze with areas fired red.

From an ST cup, see 78. Compare also from Corinth, *Hesperia*, XX, 1951, pl. 89 c, left and p. 294, second quarter of the sixth century; this cup has no reserved line below the shoulder.

80. Fragment of a Little-Master cup. Pl. 60.

C-53-164. Max. dim. of larger fragment 0.067 m.

Two non-joining pieces, including part of rim and handle attachment with palmette. Purple on palmette center; petals incised. Shiny black glaze.

From a lip-cup, cf. Beazley, *Development*, p. 53. References to other lip-cups found in Corinth: *A.J.A.*, XXXIV, 1930, p. 423, note 5.

Mid sixth century.

81. Fragment of a Little-Master cup. Pl. 60.

C-53-166. Max. dim. 0.071 m.

Rim piece. Line below rim purple. Reserved band below rim inside. Dull black glaze.

From a lip-cup.

82. Fragment of a Droop cup. Pl. 60.

C-53-116. Max. dim. of larger fragment 0.051 m.

From rim. Shiny black glaze.

Near the handle; cf. Ure, "Droop Cups," *J.H.S.*, LII, 1932, pp. 55 ff. Another Droop cup comes from the "Well of the Black-Figured Period," *Hesperia*, VII, 1938, p. 568, no. 2, fig. 1.

83. Fragment of a Droop cup. Pl. 60.

C-53-171. Preserved radius 0.047 m. Two nearly joining fragments.

Part of body with foot attachment. Rays at center; then glaze bands; running scroll pat-

tern; bands; palmettes and lotuses. Shiny black glaze.

Ure's Class IC, dated *ca.* 540 B.C. (*J.H.S.*, LII, 1932, pp. 59-60).

84. Fragment of a cup. Pl. 60.

C-53-163. Max. dim. 0.036 m. Rim fragment.

High, concave rim, sharp joint with shoulder. Mottled red and black glaze.

From a black-glazed kylix like those found in the "Well of the Black-Figured Period," *Hesperia*, VII, 1938, p. 578, nos. 30, 31, 35, fig. 8.

85. Tondo fragment: Attic black-figure. Pl. 60.

C-53-159. Max. dim. 0.05 m.

Red glaze inside, shiny black outside.

Back of a running warrior with spear and billowing cloak (?).

86. Foot of a low-stemmed cup. Fig. 2.

C-53-226. H. 0.02 m.

Low, narrow and flaring. Unglazed underside. On top, two concentric circles.

87. Kotyle. Pl. 55.

C-53-149. Diam. of base 0.089 m.

Torus foot and part of lower body. Covered all over with firm, shiny black glaze. Purple bands at foot joints, inside and out.

Another entirely glazed Attic kotyle in Corinth comes from a well group mostly of the second quarter of the sixth century (*Hesperia*, XX, 1951, p. 294, pl. 89 c, right). Both the Attic kotyle and Corinthian imitations (cf. 30) evidently appear in Corinth before the date after the mid-sixth century, which Weinberg (*Corinth*, VII, i, p. 87) gave. Numerous later Attic kotylai come from the "Well of the Black-Figured Period," *Hesperia*, VII, 1938, p. 579, nos. 42-45, fig. 9.

The appearance of this typically Attic adaptation of the Corinthian kotyle at so early a date is remarkable. For the Attic variants of the Corinthian kotyle which precede the invention

of the "Attic" type see *Hesperia*, VII, 1938, p. 401, no. 37, fig. 29; *Hesperia*, IX, 1940, p. 251, no. 313, fig. 53. For the esthetic differences between the Attic and Corinthian types, see H. R. W. Smith, *Der Lewis-maler*, Leipzig, 1939, pp. 7-8.

Second quarter of the sixth century.

88. Fragment of rim: Attic storage amphora. Fig. 5.

C-53-218. Max. dim. 0.064 m.

Thin torus neck without neck ring. Black glaze outside.

Attic oil was exported in balloon-shaped amphorae with neck markings of sigmas and circles, see R. S. Young in *Hesperia*, Supplement II, pp. 210-211. An Attic ΣΟΣ neck was found in the Early Corinthian well D (*Hesperia*, XVII, 1948, p. 227, D 69, pl. 83). This fragment clearly comes from such an amphora. For the later banded Attic storage jar at Corinth, cf. *Hesperia*, VII, 1938, p. 606, nos. 207-209, fig. 29.

ATTIC LAMPS

89. Lamp: Howland type 12 A. Fig. 2, Pl. 59.

CL 4011. Diam. 0.091 m.; H. 0.022 m. Nozzle and part of circumference missing. Shallow saucer.

Sharply drawn-in side where rim springs; bevelled at base. Rim flattened on top with ridge on outside. Beginning of cone inside. Glazed inside to rim. Semi-glaze on outside with dull black glaze. Pinkish buff Attic clay. Wheelmade.

This lamp is Broneer type II, first variety; *Corinth*, IV, ii, pp. 35 ff. and profile 11, p. 32.

90. Lamp: Howland type 12 A. Fig. 2, Pl. 59.

CL 4012. Diam. 0.083 m.; H. 0.02 m. Part of nozzle and circumference missing.

Like 89. In center, a hollow cone. Nozzle, inside bottom, rim above and beneath glazed with red glaze.

Broneer type II; references as under 89.

91. Fragment of lamp: Howland type 12 A. Pl. 59.

CL 4013. Max. dim. 0.055 m. Nozzle and part of circumference. Like 89.

Red glaze on nozzle, inside bottom; lines on top of rim.

Broneer type II; references as under 89.

Both Corinthian and Athenian evidence (*Corinth*, XV, ii, p. 248, and Howland, *Greek Lamps*) put this type in the second and third quarter of the sixth century, which is consonant with our context.

92. Lamp: Howland type 12 B. Fig. 2, Pl. 59.

CL 4014. Diam. 0.082 m.; H. 0.019 m.

Shallow saucer with flat rim sloping in. Bridged nozzle. In center a hollow cone. Undercut base. Black glaze on inside bottom, nozzle; two lines on rim. Pinkish buff Attic clay.

Broneer type III, cf. *Corinth*, IV, ii, pp. 38 ff. and profile 14, p. 32.

No doubt by accident this Attic type is earlier represented in Corinth than in Athens where it occurs in the late third and the fourth quarters of the sixth century (Howland, *Greek Lamps*). The type was recently found at Corinth together with type 12 A in a well of the first half of the sixth century (*Hesperia*, XX, 1951, p. 296, pl. 93). It would seem to run through the last three quarters of the sixth century, a very slight correction on Mrs. Stillwell's date (*Corinth*, XV, ii, p. 249).

93. Lamp: Howland type 12 B. Pl. 59.

CL 4015. Diam. 0.085 m.; H. 0.02 m.

Like 92.

NON-ATTIC IMPORTED POTTERY

94. Fragment of foot: wine amphora (?). Fig. 5.

C-53-125. Max. dim. 0.25 m. Narrow bevelled ring foot. Straight flaring sides. Buff micaceous clay, gray inside.

The fragment may perhaps come from an Attic storage jar of the form which succeeds 88. Compare *Hesperia*, XXII, 1953, pp. 101-102 under no. 147. The fabric, however, is puzzling and looks un-Attic.

95. Fragment of a stemless cup: Ionian. Pl. 60.

C-53-161. P. H. 0.065 m.; est. diam. 0.163 m. Rim fragment including handle attachment.

Like 78, but the glaze is mottled light brown and carelessly applied. The clay of this and the following two is buff, duller than Attic and very slightly micaceous. The narrow, low flaring foot is not figured; it is like 98.

The fabric is characteristic of East Greek ware. An East Greek cup comes from the Pottery Quarter: KP 1125. A cup fragment of similar fabric was found in the Athenian Agora (ΣΑ 3110). The date of this and the following cup must be near their Attic counterparts; see 78.

96. Fragment of a cup: Ionian. Pl. 60.

C-53-162. Max. dim. 0.096 m. Rim fragment.

Like 95. Broad reserved zone with line on inner shoulder cavity and below rim.

Compare, from the Samian Heraion, *Ath. Mitt.*, LIX, 1934, pl. VI, no. 10 and p. 90, "early." Reserved zones on the inside of the cup particularly distinguish Ionian cups.

Perhaps still of the first quarter of the sixth century.

97. Skyphos: Ionian. Pl. 60.

C-53-169. P. H. 0.06 m.; est. diam. 0.15 m. Rim and body fragment.

Shorter rim and deeper body than 95. Glazed all over. Glaze and clay as in 95.

98. Foot of a cup: Ionian. Fig. 2, Pl. 60.

C-53-170. H. 0.034 m.

On the upper surface five concentric circles of thinned glaze. In the center, a heavy circle of glaze turned gray. Under the glaze, circles.

The outside of the foot covered with the same gray glaze. Dull buff, very slightly micaceous clay.

Compare, from the Samian Heraion, *Ath. Mitt.*, LIX, 1934, pl. VI, no. 14 and p. 90, and *Ath. Mitt.*, LIV, 1929, p. 36, fig. 28, no. 7. A "green" glaze is frequently reported on Ionian cups (Sieveking-Hackl, *op. cit.*, pp. 49 ff.). The foot has the typical drop-cone underneath inside (cf. K. F. Kinch, *Vroulia*, Berlin, 1914, p. 146, fig. 48 b).

99. Foot fragment: Chiot(?). Pl. 57.

C-53-220. P. H. 0.023 m.

Bottom, stem, and grooved, spreading base. Top surface and foot have dull brownish black glaze over white slip. Unglazed zone above. On stem, a circle with a dot in black glaze. Pinkish gray clay.

Looks like typical Chiot fabric. For dotted circle dipinti on Chian amphorae, cf. *Hesperia*, XXII, 1953, p. 105. R. M. Cook, "Distribution of Chiot Pottery," *B.S.A.*, XLIV, 1949, p. 160 lists a few sherds from Perachora, none from Corinth, but thinks that much may have gone unremarked.

100. Fragments of amphora: Chian. Pl. 57.

C-53-126. Max. dim. of neck fragment 0.115 m.; est. diam. 0.155 m.

One neck, one body fragment.

Rolled rim; white slip. Rim covered with purplish glaze over slip. Gritty dull pink clay with mica. For Chian amphorae, see V. Grace in *Hesperia*, XXII, 1953, pp. 104, 105.

101. Fragment: Chian. Pl. 57.

C-53-124. Max. dim. 0.105 m.

Body fragment. Gritty, ruddy clay with mica.

The fabric is that of later Chian amphorae. Slipping comes to a stop during the sixth century. See the unslipped ones from a well at Corinth of the second half of the sixth century (*Hesperia*, VII, 1938, p. 608, no. 213, fig. 29).

102. Plastic vase: Rhodian. Pl. 60.

MF 9675. P. H. 0.101 m.; W. at base 0.042 m. Head missing.

Hesperia, XXII, 1953, p. 136, pl. 46, a, no. 3.

Woman seated on high-backed throne without arms. Hands on knees; the thumbs marked off; the fluted ends of the mantle hang below. Feet on a foot-board appear under gown. Hollow inside; closed on bottom. No traces of paint or slip. Buff clay with gray core. Many small particles of silver mica.

Apparently mouldmade, with paring knife marks on all sides but the front. Much worn.

The piece was identified as of Rhodian fabric in the preliminary publication. The mould and paring knife technique resembles so much that of a plastic vase in Munich (*C.V.A.*, Munich 3, pl. 150, nos. 5-6 and p. 48) that our piece is probably a vase rather than a figurine. Figurines, furthermore, have a small opening at the bottom. (Chr. Blinkenberg, *Lindos, Fouilles de l'acropole*, Berlin, 1931, Vol. I, *Les petits objets*, p. 514), while a piece with a closed bottom would need an opening on top lest it crack in firing. The Munich vase is dated in the third quarter of the sixth century; there is, however, nothing against the slightly earlier date which the context makes desirable.

The hollow mould technique appears in Perachora toward the end of the century and is said by Jenkins to derive from the East Greek technique of the mid-sixth century (Payne, *Perachora*, p. 220; Rhodian imports from there: pl. 114, nos. 282-283 and p. 252). Seated goddess types are not current in Corinth until the fifth century (*Corinth*, XV, ii, p. 95; *Corinth*, XII, no. 126). It is probably just such unguent vases, which have more cause for traveling than figurines, that brought both type and technique.

Mid sixth century.

103. Fragment of oinochoe: Gray Ware (?). Pl. 57.

C-53-187. P. H. 0.071 m.

Band handle attached at rim. Gray clay with mica.

Since the clay is evenly gray and contains more mica than ordinary Corinthian clay, I suspect that this is not just a burned piece. Compare the description by W. Lamb of Lesbian Gray Ware (*J.H.S.*, LII, 1932, p. 3) which occurs in the seventh and first half of the sixth centuries B.C.

A nondescript piece of a Gray Ware amphora was also found in the well (see V. Grace in *Hesperia*, XXII, 1953, pp. 102-104 on these eastern amphorae).

104. Amphora neck. Fig. 5.

C-53-224. H. 0.135 m.

Cylindrical neck with torus lip, under which a careless raised band. Handle under rim. Gritty warm buff clay with much golden mica.

Another such neck was not inventoried.

Provenience unknown.

AN ATHENIAN CASUALTY LIST

AMONG inscriptions copied in Greece by Sir George Wheler which still remain unpublished is a fragment from an early Athenian funerary list of the fifth century B.C. Wheler's text (Fig. 1) is in Add. MS. 35334 in the library of the British Museum,¹ from which the transcript on page 377 has been prepared.

Nothing definite can be said about the place of discovery of the stone. Wheler's only note is that he saw it in a private house. He copied on the same page with it no. 306 (*I.G.*, II², 6570), which is otherwise known to have been in Kephisia, and nos. 307 (*Hesperia*, XVI, 1947, p. 289) and 308 (*I.G.*, II², 5939), which are known to have been in Athens. The manuscript copy contains a good many obvious errors that are easy to correct; it has also several readings that are difficult to understand and in which there is more uncertainty about the proper emendation.

Wheler was evidently aware that he was copying a list of men who had fallen in battle, for he has -ΠΕΘΑΝΟΝ in line 27. Even though his interpretation of the monument was correct, his reading of [ἀ]πέθανον was almost surely wrong. It stands alone, like other names of the fallen in the first column of this two-column inscription, and must itself be the name of an Athenian who lost his life in battle. I have suggested the emendation [Σ]⟨τ⟩έ⟨φ⟩ανο⟨ς⟩. The confusion of nu with 3-bar sigma suggests an early date for nu, with sloping strokes; the confusion between theta and phi suggests an early phi in which the transverse vertical stroke did not protrude beyond the circle. Other letters as copied by Wheler give little evidence of date: he confused gamma and lambda, kappa and chi, iota and upsilon, mu and nu; he always wrote round rho and beta, though it is possible that both were angular; and he occasionally wrote a 4-bar sigma which he afterwards corrected. I believe that this text was part of *I.G.*, I², 928, that (like it) it should be dated in 465/4 B.C.,² and that the names of the fallen were probably of Athenians who died in the disaster at Drabeskos in 465 B.C.

¹ No. 305 (LXXX) on p. 85. For the manuscript see also *Hesperia*, XII, 1943, p. 43, note 100. I am indebted to the Trustees of the British Museum for permission to publish this item.

² For the date of *I.G.*, I², 928, and for the disposition of fragments *a* and *c*, at least, with two columns on their principal face, see Meritt, Wade-Gery, McGregor, *Athenian Tribute Lists*, III, 1950, pp. 108-110.

Inscriptiones ATTICAE.			85
305 306	LXXX. in domo privatâ	LXXXI	
	ΕΥΧΕΝΡΟΣ	in columnâ	
	ΚΡΑΤΙΟΣ		
	ΧΣΕΝΟΦΟΝ	ΔΙΟΝΥΣΙΟΣ	
	ΕΥΒΙΟΣ	ΑΥΛΟΥ	
	ΠΕΔΙΕΥΣ	ΚΥΔΑΘΗΝΑΙΕΥΣ	
	ΣΤΡΥΓΕΝΕΣ	ΑΡΙΣΤΟΤΕΙΕΣ	
307	ΣΠΟΥΔΙΑΣ	ΣΕΜΟΝΙ	
	ΚΛΕΔΙΚΟΣ	ΑΝΑΘΟΣ	LXXXII
	ΦΙΛΕΑΣ	ΔΕΞΙΣ	in adibus Dni Benaldi
	ΑΝΤΙΚΛΕΣ	ΟΙΝΕΥΣ	ΑΧΝΥΘΕΝΤΟΔΕΔΩ
	ΘΡΑΣΙΜΕΝΟΝ	ΔΙΟΤΙΜΟΣ	ΡΟΝΥΠΕΡΤΑΦΟΝΕΙΣΑ
	ΟΛΥΜΠΙΚΟΣ	ΑΝΤΙΛΕΚΕΣ	ΤΟΜΗΤΗΡΠΑΙΔΙΦΑΟΥ
	ΑΡΙΣΤΙΟΝΙΔΕΣ	ΕΥΑΝΔΡΟΣ	ΟΜΙΤΟΥΠΑΜΠΑΝΑΠΟΝΕ
	ΚΕΡΥΚΙΔΕΣ	ΦΡΥΜΟΝ	ΜΕΝΟΥΘΟΥΝΟΜΙΑΔΕΣΤΙ
	ΕΥΘΥΚΛΕΣ	ΝΑΥΜΑΧΟΣ	
308	ΔΕΜΕΤΡΙΟΣ	ΝΥΡΤΟΝ	LXXXIII ibid
	ΑΝΑΧΕΤΙΔΕΣ	ΦΙΛΙΔΕΣ	
	ΒΙΣΟΝ	ΚΡΙΜΑΣΙΔΕΣ	ΜΕΛΙΤΗΝΗΙΟΔΟΡΟΣ
	ΑΜΦΙΟΣ	ΚΑΛΛΙΑΣ	ΕΓΓΑΡΓΗΤΙΟΝ
	ΜΝΕΣΙΜΑΧΟΣ	ΑΝΤΙΜΑΧΟΣ	figura ibid
	ΕΟΚΛΕΙΔΕΣ	ΑΝΤΙΟ-	
	ΝΑΘΟΝ - ΦΡΟΝ	ΚΡΙΤΑΣ	
	ΜΟΣΤΡΑΤΟΣ	ΘΕΟΙΝΙΣ	
	ΡΑΤΟΝ - ΜΕΤΡΙΟΣ	ΑΝΤΙΑΣ	
	ΡΟΔΙΑΝ -	ΚΑΛΛΙΚΛΕΣ	
	ΤΡΟΒΙΟΣ	ΚΑΛΛΙΑΣ	
	ΠΕΘΑΝΟΝ	ΧΑΡΙΚΛΕΙΔΕΣ	
	ΟΡΥΚΟΣ - ΛΙΜΟΣ	ΛΥΣΥΚΛΕΣ	
	ΥΑΝΔΡΟΣ	ΛΥΣΤΕΡΟΣ	

FIG. 1. A page from Add. MS. 35334 in the British Museum.

(I)	(II)
----- -----	30 Εὐ<μ>έν<ι>ος
Χσενοφῶν	Κράτιος
Εὐβιος	Λ<υ>σίστρατος
5 Πεδιεύς	Δεμοκλῆς
Στρυ<μογ>ένες	Δέχσον
Σπουνδίας	35 Ἀριστοτέλης
Κλέδικος	Σεμονί[δες]
Φιλέας	<Γ>νάθιος
10 Ἀντικλῆς	Δέχσις
Θρασ<υ>μέ<δ>ον	Οἶνεύς
᾽Ολύμπι<χ>ος	40 Δ<ε>μότιμος
᾽Αριστιονίδες	᾽Αντιγέ<ν>ες
Κερνκίδες	Εὐανδρος
15 Εὐθυκλῆς	Φρύ<ν>ον
Δεμέτριος	Ναύμαχος
᾽Ανασχετίδες	45 <Μ>ύρτον
Βίσον	Φιλλέδες
᾽Αμφιος	Κριμασίδες (?)
20 Μνεσίμαχος	Καλλίας
[Ν]εοκλείδες	᾽Αντίμαχος
[Γ]νάθον, [. . .]φρον	50 ᾽Αντιο[---]
[Δε]μόστρατος	<᾽Α>ριστ[έ]ας
[Στ]ράτον, [Δε]μέτριος	Θέο<γ>νις
25 [Φυ]ρό<μ>αχ[ος]	᾽Αντίας
[Με]τρόβιος	Καλλικλῆς
[Σ]<τ>έ<φ>ανο<ς>	55 Καλλίας
[Μ]όρν<χ>ος, [᾽Αλ]<κ>ιμος	Χαρι<κ>λείδες
[Λ]ύσανδρος	Λυσ<ι>κλῆς
	L::ΥΣΤΕΡΟΣ

See the photograph for lines 6, 11, 12, 25, 27, 28, 30, 32, 37, 40, 41, 43, 45, 51, 52, 56, 57, and 58. In some lines other readings are equally possible: in line 21 [Θ]εοκλείδες, in line 23 [Τε]μόστρατος, in line 26 [Πα]τρόβιος.

BENJAMIN D. MERITT

INSTITUTE FOR ADVANCED STUDY

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(VOL. XXV)

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- Λυσ<ι>κλῆς, in a funerary list *a. 465/4 a. (?)*,
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377 26. The alternative is [Πα]τρόβιος
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377 20
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- <Μ>ύρτων, in a funerary list *a. 465/4 a. (?)*,
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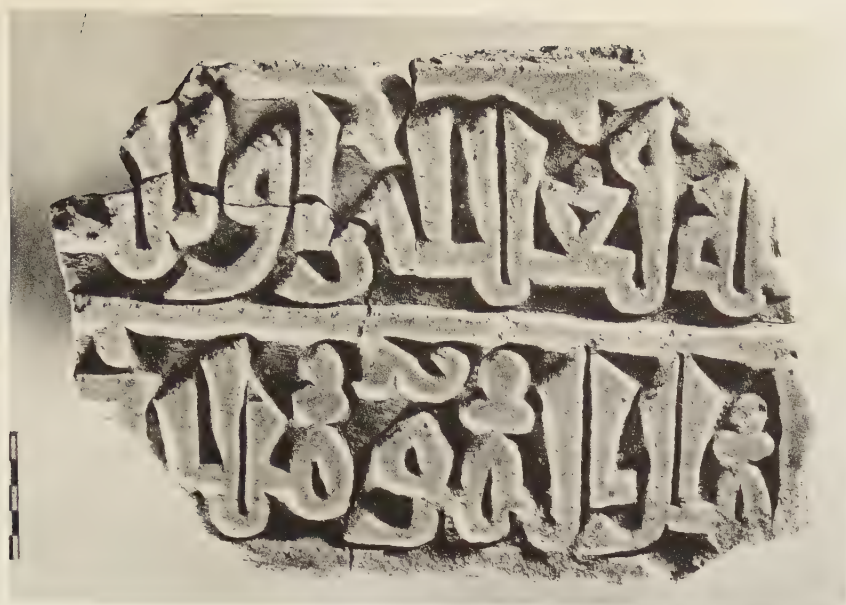
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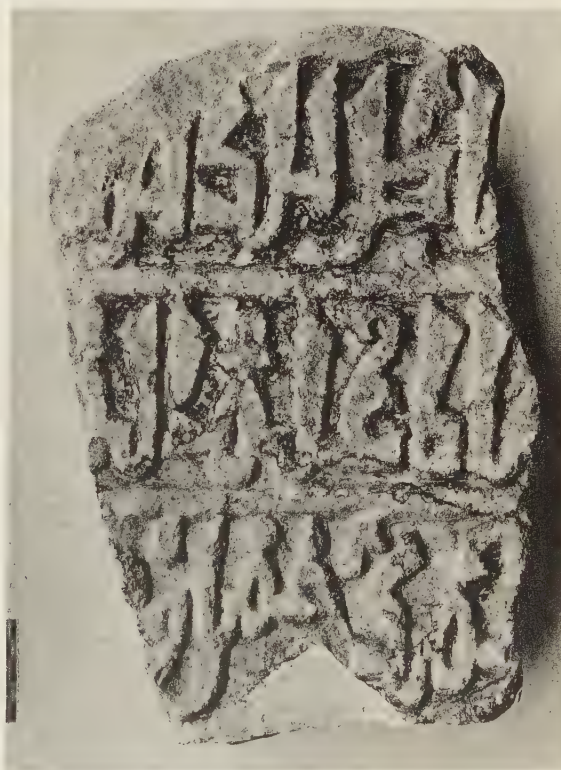
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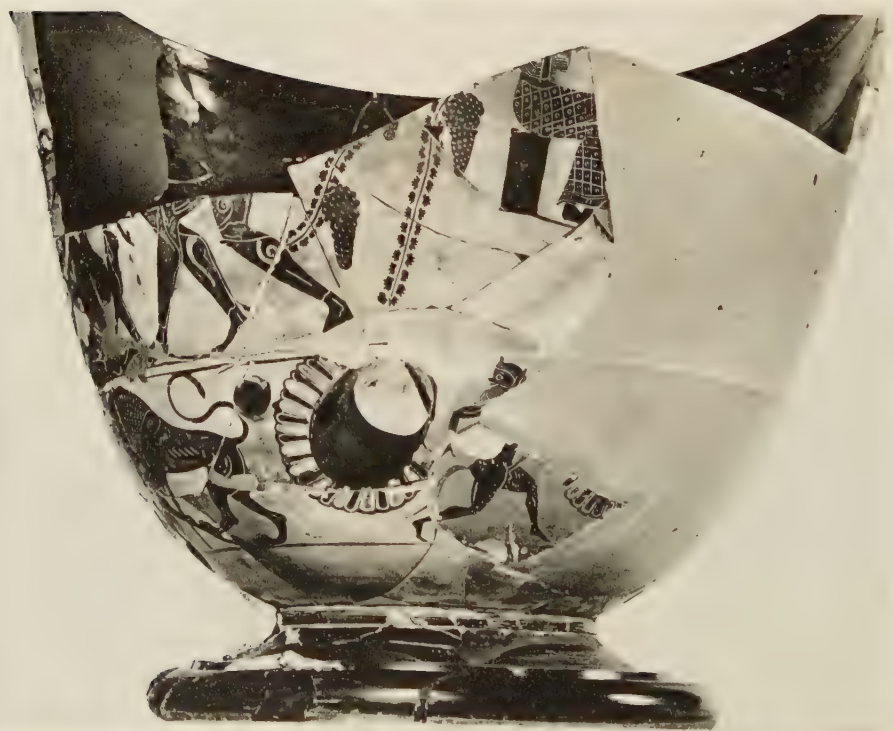
c. Byzantine Museum 315



d. Fragment found in Asklepicion in 1877



e. Byzantine Museum 313



a. and b. The North Slope Krater showing New Fragments



a. North Slope Krater showing New Fragment with Satyr



c. Pharsalos Krater, Protagonists in Warrior Scene



b. Pharsalos Krater, Warrior Scene



d. Pharsalos Krater, Handle Ornament



3

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1



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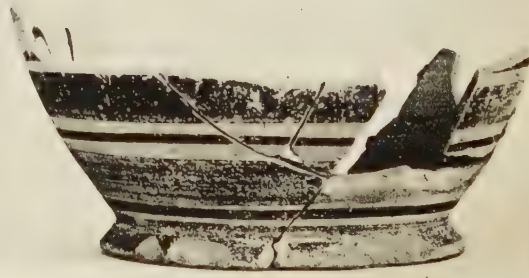


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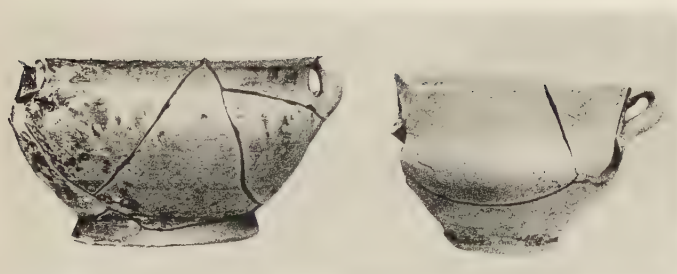
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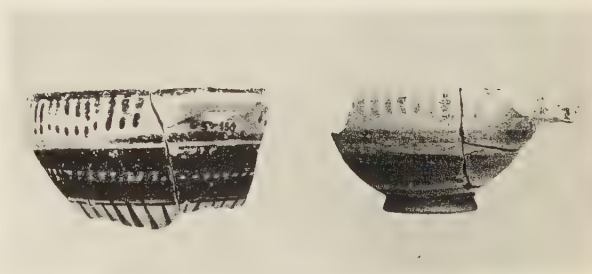
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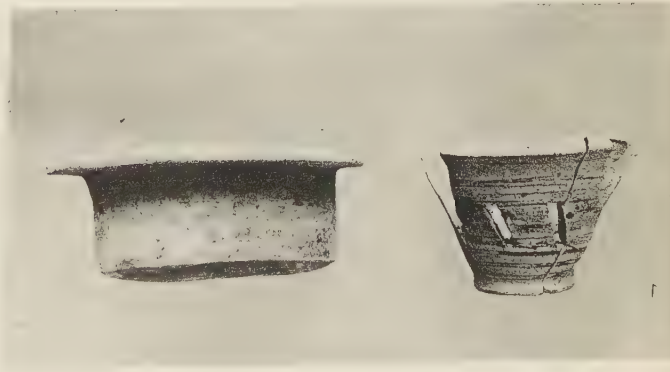


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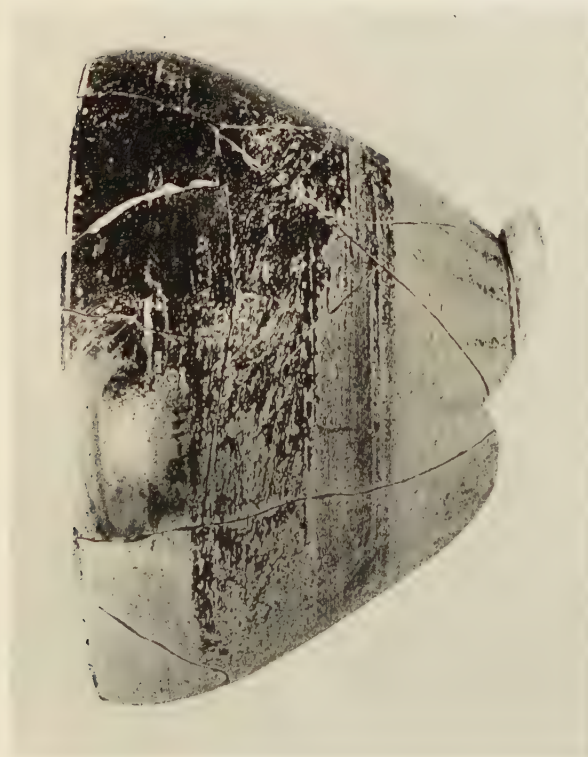
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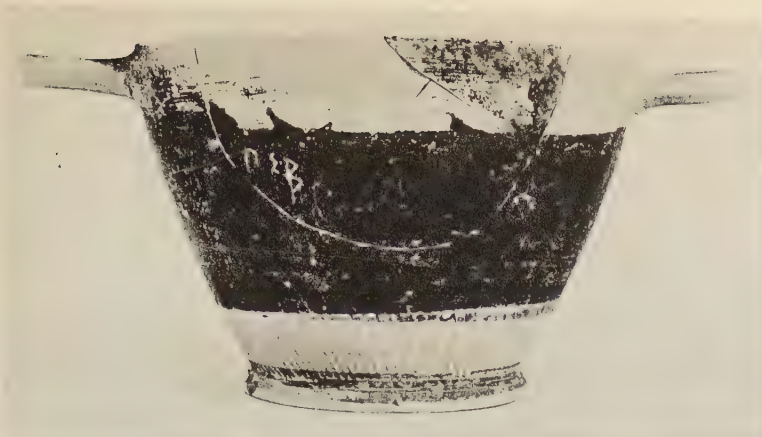


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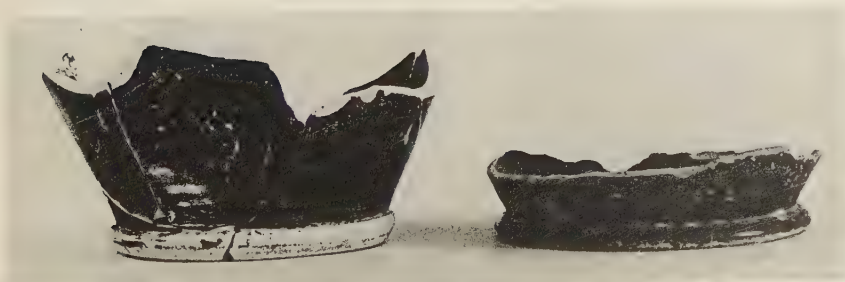
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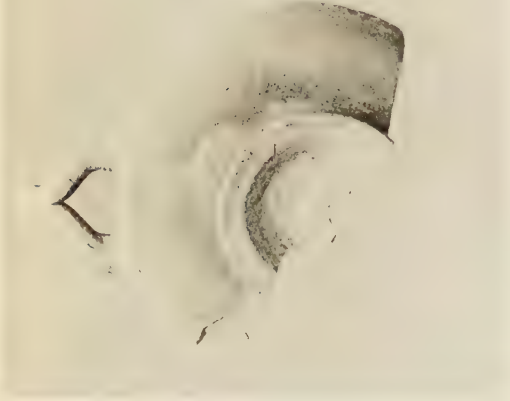
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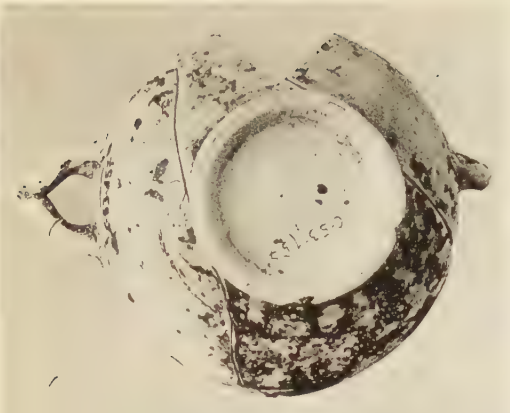
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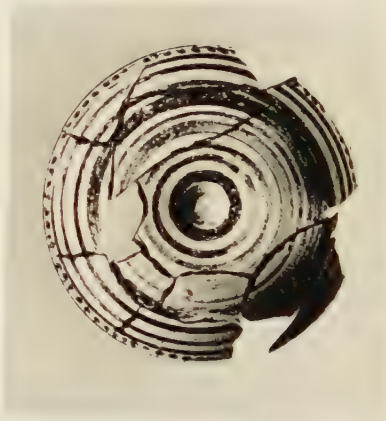
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EVA BRANN: A WELL OF THE "CORINTHIAN PERIOD" AT CORINTH



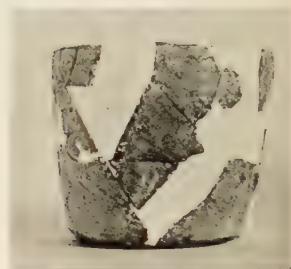
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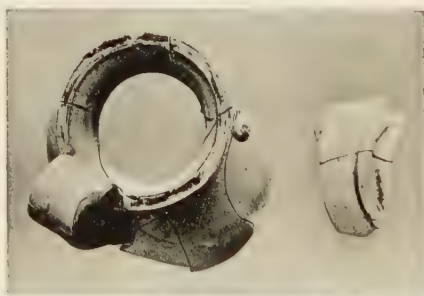
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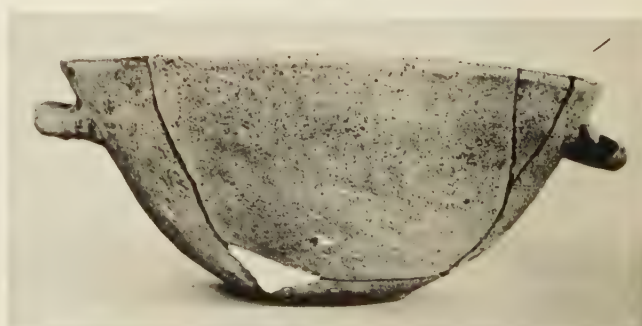
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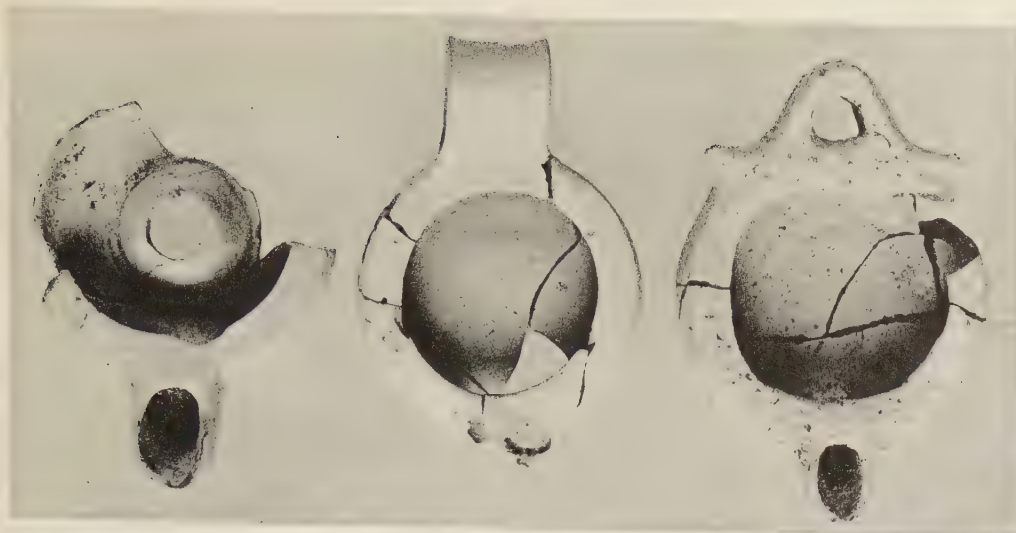


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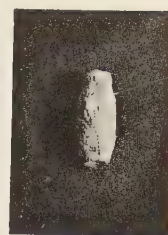
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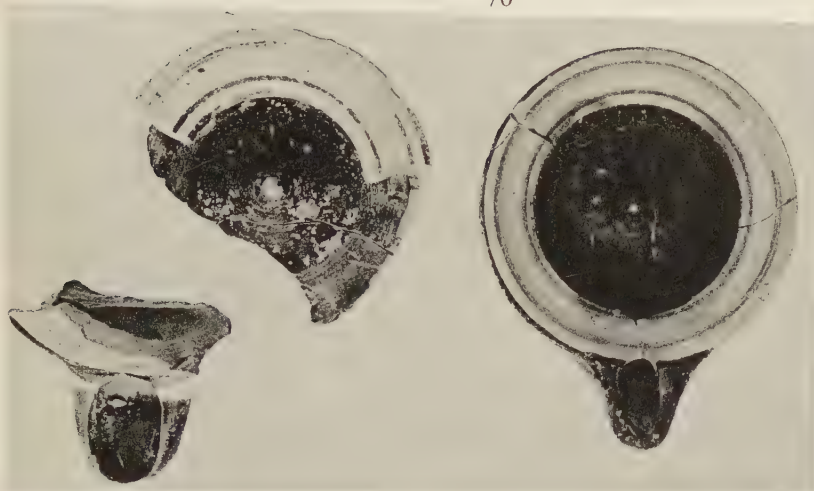
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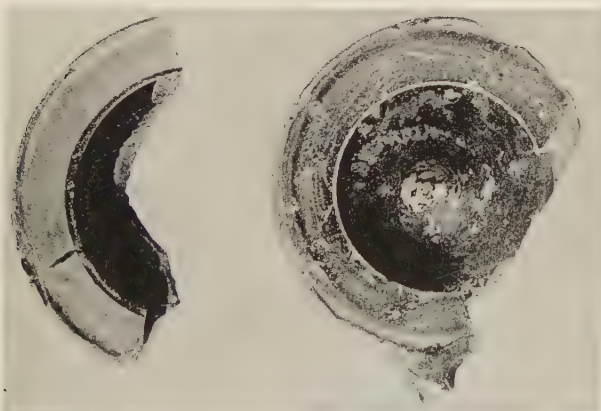
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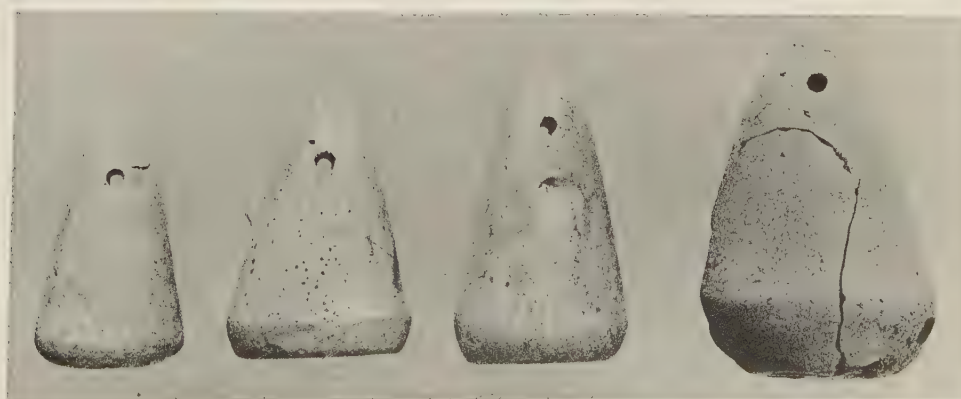
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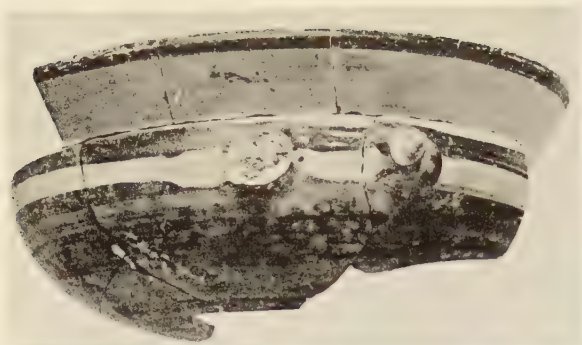
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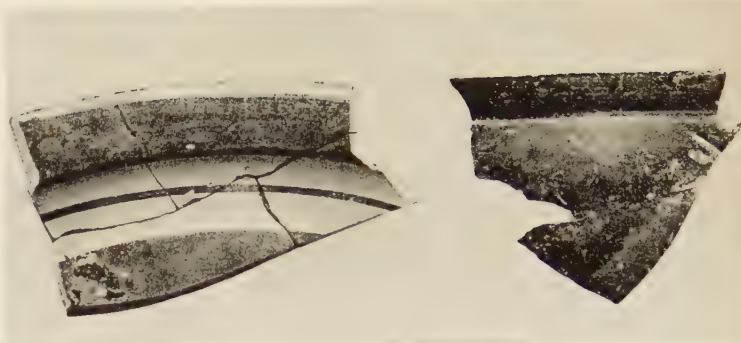
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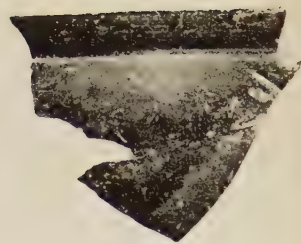
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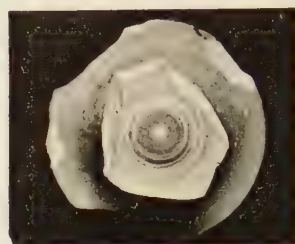
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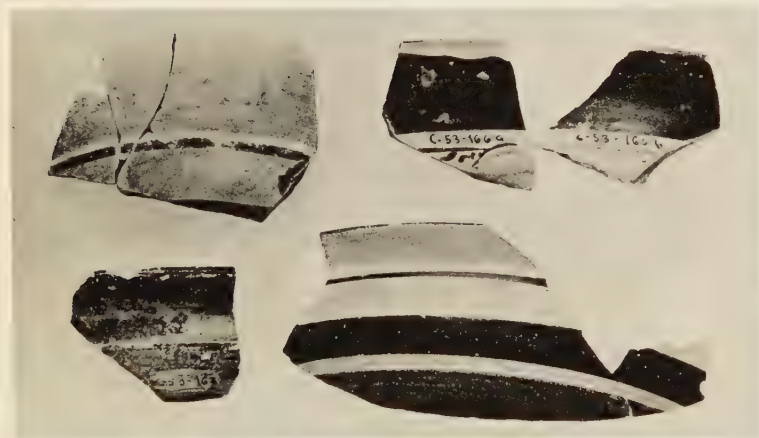
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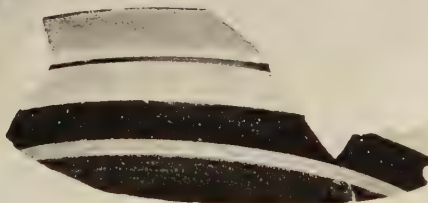
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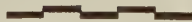
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CORINTH

RESULTS OF EXCAVATIONS CONDUCTED BY
THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

VOLUME I, PART IV

THE SOUTH STOA AND ITS ROMAN SUCCESSORS

By OSCAR BRONEER

With this volume the publication of the buildings surrounding the Agora of Corinth, begun in earlier parts of Volume I, is continued; all structures on the south side are included. After a discussion of the fragmentary evidence for several buildings of the Greek period which were swept away by the South Stoa and of water works which precede it, the South Stoa is treated in detail. Careful description of all the remains, both those *in situ* and re-used blocks, forms the basis of the reconstruction of this extensive 2-storey building of the 3rd quarter of the 4th century B.C. which stretched the full length of the south side of the Agora and, more than any other single building, established the size and shape of the Corinthian Agora in the six centuries of the Hellenistic and Roman periods. It emerges as one of the outstanding creations of Greek civic architecture. One of the largest secular buildings in Greece, it appears to have been planned as a Grand Hotel to accommodate delegates to the Hellenic league and the many other visitors at the time Corinth served as the capital of the Greek world, united for a brief era. After the destruction of Corinth, it remained comparatively undamaged and was taken over by the Roman colony as the seat of its administrative offices. Gradually, over the course of four centuries of the Roman empire, into the shops of the ground floor (the second-storey by now destroyed or removed) were built various buildings, including a bouleuterion, a fountain house, a bathing establishment, a public latrine.

Of unusual value and significance in the study of Greek architecture is the material here set forth, offering evidence for new conceptions of planning and design and hitherto unknown types of interior installation in the standard stoa plan in the Greek period, as well as new light on the effects of the union of Greek and Roman architectural traditions in Imperial times.

Published March 1955. xix + 167 pages with 67 figures in the text, frontispiece, 1 color plate, 54 half tone plates, and 22 plans. Quarto. Cloth. \$15.00.

GENNADEION MONOGRAPHS IV

CASTLES OF THE MOREA

By KEVIN ANDREWS

Among the treasures in the Gennadius Library in Athens is a set of forty drawings, mostly plans, but some elevations, of the castles of the Peloponnesos which were in Venetian hands from ca. 1685-1715. Many of them carry the arms of Francesco Grimani and probably most of them were made to accompany his reports to the Venetian Senate while he was *Provveditore Generale dell'Armi in Morea* in 1699-1701. Using these drawings as a starting point, the author has made a study of 16 castles of the Peloponnesos, that of Chalkis, and that of Canea.

After an introduction which summarizes the history of the Peloponnesos from late classical to modern times, there is given for each castle 1) an account of the siege in which it fell to the armies of the Holy League in the campaigns of 1685-1692, 2) a recapitulation of its history from its earliest known beginnings to its last military engagement, and 3) an architectural description (copiously illustrated) of the castle as it stands today, in which attempt is made to date the various sections. The Conclusion summarizes the evidence for the architectural styles that have been identified with the several periods from the Early Byzantine to the Late Venetian. The forty Grimani drawings are catalogued in detail. *A Chronology of the Morea and Related Events in the Levant* completes the volume.

This volume not only presents the history of mediaeval Greece in a different form which will prove useful and entertaining to scholars and laymen alike, but it offers a major contribution to the study of military architecture and of mediaeval types of construction. The publication of the Grimani plans is an addition to the Venetian archives.

Published September 1953. xix + 274 pages, 231 illustrations in the text, 40 plates. Quarto. Half cloth. \$15.00.

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NEW JERSEY, UNITED STATES OF AMERICA.

NEW PUBLICATIONS
OF
THE AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

HESPERIA SUPPLEMENT X
SMALL OBJECTS FROM THE PNYX: II

By LUCY TALCOTT, BARBARA PHILIPPAKI, G. ROGER EDWARDS, VIRGINIA R. GRACE

This volume completes the publication (begun in Supplement VII) of the objects found in the excavations of the Pnyx hill in Athens conducted between 1931 and 1937 under the joint auspices of the Department of Antiquities of the Greek government and the American School of Classical Studies at Athens. It includes three parts: I Figured Pottery, II Hellenistic Pottery, III Stamped Wine Jar Fragments.

Of the 331 fragments of vases catalogued in Part I, only 16 are black-figured (including Panathenaic amphorae) and three have plastic decoration; the others are all red-figured and the majority of them come from a filling of the time of the rebuilding of the Assembly Place in the third quarter of the fourth century B.C. They are arranged by shape. A brief outline of the development of the coarser fourth-century styles is given in the introduction. The 122 fragments catalogued in Part II are from Megarian bowls or their moulds and two stacking rings; they seem to be the refuse from a potter's workshop and give evidence for technique. The catalogue of Part III includes Thasian, Rhodian, Knidian, Pontic, Chian and Lagynos, Corcyrean (?), Parian, Parmeniskos Group, Coan, Latin stamped, Imperial and Byzantine handles; each class has an introduction emphasizing the new contributions of this material. For each part there is a bibliography, concordance, and Index.

New chronological evidence for fourth-century pottery and for amphora handles gives this volume special significance. The illustration of every figured fragment illumines fourth-century coarse wares; both subject matter and technique of Megarian bowls are further clarified, and new information regarding certain classes of stamped handles, especially Thasian, Knidian and Rhodian, is offered.

Published February, 1956. ix + 189 pages, 7 figures in the text, 1 chart, 80 collotype plates. Quarto. Paper. \$7.50.

THE ATHENIAN AGORA
RESULTS OF EXCAVATIONS CONDUCTED BY
THE AMERICAN SCHOOL OF CLASSICAL STUDIES
VOLUME II
COINS
FROM THE ROMAN THROUGH THE VENETIAN PERIOD

By MARGARET THOMPSON

The 37,090 catalogued coins from the last century of the Roman Republic to the declining years of the Republic of Venice which were found in the excavation of the Athenian Agora between 1931 and 1949 are treated here. They are tabulated in an abbreviated catalogue form to which is added commentary on all the issues of special interest or to the understanding of which the Agora material makes a contribution. The Introduction presents a brief summary of the historical picture of the coinage of Athens through the centuries concerned and its relation to other archaeological evidence. A table of coinage ratios for each reign in the Roman and Byzantine periods illumines the picture particularly clearly. The evidence for the mints which supplied Athens at various periods is especially significant. A numerical summary and an Index of Rulers and of Mints complete the volume.

The commentary includes valuable discussions of the new evidence offered by these coins for new types, for new mints striking known types, for new forms of mint marks, for the location of the second Asia mint of Valerian, for the location of the mints which struck the "Vandalic" issues, and, especially important, for the dating of the Byzantine anonymous issues.

Published May 1954. x + 122 pages, 4 collotype plates. Quarto. Cloth. \$5.00.
